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JAN TO JVNE 1916.

THE BVILDER

AN : ILLUSTRATED : WEEKLY MAGAZINE : FOR : THE ARCHITECT : ENGINEER : ARCHÆOLOGIST : CONSTRUCTOR : SANITARY - REFORMER : AND ART-LOVER.

"EVERY man's proper mansion-house, and home, being the theater of his hospitality, the seate of selfe-fruition, the comfortablest part of his own life, the noblest of his sonne's inheritance, a kind of private princedome, nay, to the possessors thereof, an epitome of the whole world, may well deserve, by these attributes, according to the degree of the master, to be decently and delightfully adorned."

"Architecture can want no commendation, where there are noble men, or noble mindes."—SIR HENRY WOTTON.

"OUR English word To BUILD is the Anglo-Saxon Bŷlðan, to confirm, to establish, to make firm and sure and fast, to consolidate, to strengthen; and is applicable to all other things as well as to dwelling-places."—DIVERSIONS OF PURLEY.

"ALWAYS be ready to speak your mind, and a base man will avoid you."—WILLIAM BLAKE.

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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

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THE PRESENT AND FUTURE.

THE year which is past has been in every way an abnormal one, and, looking backwards, we feel that the wonder is not that our national industries have been disturbed and dislocated, but that they have not suffered more from the effects of the tremendous conflict now being waged over the greater part of the Old World. That industry has not been more affected is due to the efficiency of our sea power and the fact that the Allied nations now facing Germany and Austria are convinced of the necessity and righteousness of the war and of the inevitable triumph which will bring it to an end, leaving to the nations of Europe a lasting peace such as its peoples have not known since the days of the Roman Empire. Whatever Europe may go through in its period of trial, it is certain that generations yet unborn will be freer, happier, and more prosperous because of a settlement only to be reached through war; while it will seem to them an epic period, marked by deeds of heroism and high endeavour. Commercially, what may be called the United States of Europe are in process of formation in the stress and unrest of war, which, while it has served to define and accentuate all that is best in nationality, also emphasises the advantage of united efforts and the existence of common interests. The present war is likely to mark the death of the old system of armed tyranny and the beginning of a new era of better understanding of the wants of humanity, and of the organisation by which these wants can be most effectively met.

Every profession and trade has contributed its quota to the armed forces of the country, and many sections of the working classes have enjoyed the greatest prosperity they have ever had—a circumstance which will have its effect on social problems in the future and must strongly affect the industry of building. High wages, an improved standard of living, coupled with the fuller knowledge which those who have served side by side in the trenches will have of one another, are bound to break down the barriers which separate class from class, and to bring in their train a recognition of the necessity for better accommodation for the dwellers on the land. The war has, in fact, accelerated housing reform by spreading the conviction that slums in country and town alike must be done away with. The greatest socialists among the working classes will have learnt, by actual example, that the upper classes are willing to face danger, hardship, and death for the nation, while they in turn will recognise that the workers of the land who have made the same sacrifices have an inalienable and natural claim to demand that the conditions of life of the workers should be made good and healthy ones. Our commercial horizon will be enlarged, and there are signs that those in authority are taking measures to cope with the new situation by dealing more sympathetically with commercial wants and interests than they have hitherto done, and a fuller volume of trade will do much towards making good the losses of war, while it will serve to give comfortable employment to a greater proportion of the population than heretofore.

Experts have predicted that we shall go through three stages after the war; firstly, a period of serious dislocation of trade, causing much unemployment and lasting for several months; secondly, a period of great trade activity, lasting for some years; and, lastly, a long period of trade depression. As to the first, it will largely depend on the rate at which demobilisation takes place, and the preparation, or want of preparation, which is now made for the coming of peace. If, as has been wisely urged in many quarters, housing and other necessary building schemes which have been kept back by the war are prepared and thought out, the building industry can absorb a great deal of labour directly it is released, while similar preparation in commercial fields will enable us to avail ourselves of the orders which will be ours if we are ready in connection with the restoration of the devastated districts in Europe. In fact, wise organisation will enable us to escape the danger of the Caudine Forks which may lie between us and the period of commercial prosperity which will inevitably follow.

It is to be hoped that our manufacturers will have learnt by experience, and will not, as they have frequently done in the past, lose markets by a failure to study the wants and habits of foreign peoples, and, if we cannot escape the recurrent periods of boom and depression which seem to mark modern industrial development, the wise co-operation between groups of industries can very largely modify their incidence, rendering it less acute. But every agency, public and private, will be needed to make up the housing deficiency and to provide the new factories and works which will be necessitated on the advent of peace, and legislation may be necessary to sweep away some of the artificial barriers which have restricted the output of capital in building enterprises.

In view of the enormous changes which are likely to take place, one factor ought to be borne in mind. In the past fifty years we have seen schools built which are now regarded as being unsuitable for modern teaching, hospitals constructed which do not commend themselves to modern science, and railway bridges built too small to permit the use of the most efficient rolling stock. The development of our towns has been so enormous and so little anticipated that both roads and buildings have been constructed which we should like to see altered and enlarged, but which we cannot afford to destroy.

We are at every turn hampered by the results of the deeds of the generations which preceded ours. Warned by past experience we may bear the future sufficiently in mind, and not allow our successors to suffer for our own want of imagination. Recently in drawing attention to the existence of slums in Scotch towns an authority regretted that the leasehold system was almost unknown in Scotland, because, while English slums disappeared automatically, the slums of Scotch towns remain, as they were solidly built. We think there is room in many districts, not for jerry-building, but for buildings meant to last for a limited period only, because future requirements may differ largely from our own, and we believe that this should be borne in mind and provided for in the building by-laws of specified areas and districts.

We have dwelt on the future largely to the exclusion of the immediate past, since, with the exception of the final stage of the Board of Trade Competition, the competition held for the Replanning of Central Bradford, and a few other projects the carrying out of which is postponed for the term of the war, building has been confined to a number of commercial premises and private works owing to the withholding of the usual grants and the shortage of labour in the building trades due to enlistment and the various munition and other works necessary to the prosecution of the war. All that can be done at present is to make every preparation for the resumption of full activities in building and its attendant industries, as it must be one of the first great callings to be needed by the community with the return to normal conditions, which we trust may not be very long delayed.

FLANDERS AND BRABANT.

PHILIP the Bold, Duke of Burgundy, acquired a wedding portion already enriched by architecture when late in the fourteenth century he annexed the province of Flanders through matrimony. When this inheritance again passed, on the marriage of Mary, the beautiful child of Charles the Bold, to Maximilian of Hapsburg, after the lapse of the fifteenth century, its architectural splendour had become considerably increased in the hey-day of mediæval art. Architecture and all the decorative arts, and a wonderful school of painting, illustrated both the splendour of the province and of the dynasty. The glories of Flanders culminated in the birth of Charles V., afterwards Emperor, at Ghent in 1500, paled in the miseries of the Spanish Terror at Antwerp in 1566, under his son, Philip II., and passed away gradually, with their designation as the Spanish and Austrian Netherlands, to enter modern times with a measure of revival in the modern Kingdom of Belgium.

The Town Halls of Flanders and Brabant belonging to the fifteenth century form a most significant group of monuments. They bear witness to the vigorous independence and wealth of their municipalities, as well as to the power of Gothic architecture in the civil sphere. Their historic witness to sturdy civic life, as well as to that of artistic and intellectual power, compares remarkably with that of the cities of the Duchies and Republics of Northern Italy at this same period of the Cinquecento; they lay respectively at the northern and southern limits of the Holy Roman Empire, with the integrity and polity of which they were both more or less concerned, but of which neither supplied a constituent. Until the primacy passed to France in the succeeding era the Flemings and the Florentines, among the European peoples, led the movements of intellectualism and art. The Renaissance illuminated both alternately and in combination; it may be said that the poles of its revolution lay in Flanders and Tuscany, and it is certain that their arts and sciences have more permanent importance than the furtive political *jeu de paume* between the Emperor and the Pope which fills the historian's perspective.

The Netherlands are but reminiscent of the discomforts of Erasmus at Louvain, though the influence of his intellect diffused itself throughout Europe; they still, however, retain amidst their original associations some of the works of the primitive and Early Flemish painters, though most are gathered into galleries at Brussels and Antwerp, and a representative sprinkling gives interest to many foreign collections; but the architectural art of the Flemings is necessarily rooted in the soil. It is in Flanders and Brabant only that pilgrimage can be paid, and, so long as the exigencies of modern civilisation permit, the architect will derive from these provinces the still vital inspiration of the civic splendour in their unrivalled group of mediæval monuments. Bruges, Ghent, Brussels, Louvain, Ypres, and Courtrai furnish a list of Town Halls and Courts of Justice as consistent in their epoch of the fifteenth century as they are varied in character. The Hôtels de Ville of Louvain and Ghent resemble one another in type, but the variety of all in the group is very marked—the scale is always magnificent, dominating the city as the cathedral does in England; the mass is powerful and concentrated in outline, the detail rich within and without; and the towers and belfries piquant and original in form. This wealth of spontaneous freshness, which does not sink into the exaggerated originality of the Renaissance, and the characteristic municipal type, which is never suggestive of the ecclesiastical tradition, as in the secular Gothic of our own land, have afforded especial profit to the English architectural student, who has discerned in these buildings, not only a new virility in Gothic design, but a correspondence to the claims which our modern development of municipal life have imposed upon him.

English civic architecture of the nineteenth century seemed to lie outside the natural bed of the stream of the Gothic Revival. Ecclesiastical life and art, in the accepted nature of things, appeared to transcend that of the commercial market-place and the ideals divided in architectural expression. Arguments with which the vituperative Pugin assailed the habitual Classic architecture did not attach to buildings of secular purpose with any sticking quality; he was more effective in attacking the use of "Pagan" forms for places of Christian worship than in abusing the grandeur of Hardwick's entrance to Euston Station. It is not to be wondered at that the clergy responded more readily than the laity to the Gothic movement, and a dual architectural ideal was for a time accepted. Sir William Tite, the architect of the Royal Exchange, was as content in his day to adopt a Gothic style for the Scotch Church in Regent-square as the Liverpool Cathedral Committee in ours, with belated zeal, has been to stipulate for a Gothic glorification of the city of St. George's Hall. The wealth and increase of ecclesiastical art at home, compared with secular remains, afforded a natural fount for students, and was more easy of translation into practical purposes of a similar nature than of use for civil purposes. Domestic architecture, which in England hankers after Romanticism, employed Gothic from the earliest dawn of the Revival and enjoyed an imagined association with Norman and Plantagenet ancestors in the use of their ornaments and battlements. It was the competition for the Houses of Parliament, the most important edifice in England of the nineteenth century, which first induced the application of serious Gothic to a great secular purpose. The success of the group is really accidental through the reaction of the enforced dignity of the plan upon the mixed elements of the elevation and by aid of the robe of tracery and petty detail which uniformly enriches each of the very diverse elevations. But the source of interest was in its relation to Henry VII.'s Chapel near by, and the building, with all its assumed slavery to historic guise, is without any real English precedent. This is not perhaps to us a matter of regretful comment; it is rather a welcome, because undesigned—evidence of the essential strength of the character of our age in asserting itself through such an elaborate mask. By the time that the New Palace at Westminster was completed Tudor Gothic was thoroughly played out as material for Revival. The patriotic glamour of its peculiarly English phase of Gothic did not avail long; no public building, even of minor importance, was attempted by any leader of the school, and it was left to Sir James Pennethorne, an accomplished Classicist like Barry, to sing the swan-song of modern Perpendicular in building the Record Office on a retired site in Fetter-lane. The subsequent extensions to the important frontage in Chancery-lane by the official architects of the Office of Works, of course, do nothing to redeem the failure of this final experiment in Tudor.

But the devouring energy of the Gothic movement was not to be contented with a monopoly of ecclesiastical or a predominating influence in domestic architecture. The competitions at Manchester—first for the Assize Courts and soon afterwards for the Town Hall—revealed a widening outlook, and a survey of the series of municipal buildings belonging to the era of the Law Courts competition proves not only the defeat of the Italian School of Sir William Tite, but the advent of Continental elements into the civil architecture of the Gothic Revival. If France at this period was contributing new life to our ecclesiastical work, Flanders was inspiring the architects of our civil buildings by its suitably magnificent types. There was a competitive stress between the appeal of such examples of what was proudly known as the universal Classic style, as the Town Halls at Halifax and Leeds and the new expression of Gothic in the municipal buildings at Manchester, Chester, and Northampton. With freedom and adaptability came originality. The opportunity was taken advantage of for secular Gothic towers and Campaniles of a non-ecclesiastical type, for which the Clock Tower at Westminster was not a sufficient inspiration, and we can appreciate the eagerness with which the belfries of Flanders were seized upon, digested, and re-embodied as entirely direct expressions of civic power.

To this epoch belongs the design by Sir Gilbert Scott for the Town Hall at Hamburg, which is reminiscent in its composition of the Great Cloth Hall at Ypres. The design undoubtedly had great influence and probably attracted attention to its prototype. Ypres illustrates mediæval secular architecture on a scale which is unrivalled on the Continent, and embodies elements of dignity more usually attributed to Classic. It has a grand tower, centrally placed, rising from the plane of an immense length of elevation, rendered effective by the symmetrical repetition of traceried windows in the middle story and by a continuous parapet cornice. Gothic without buttresses and with a severe economy of pinnacles was a new and welcome phase which quickly caught the public mind and introduced a much wanted motive of rhythmical breadth into the practice of Gothic. Massive grandeur as at Bruges, richness concentrated as at Ghent and Louvain, and emphasised with a symmetrically-placed tower as at Brussels, all illustrate the wealth of the architectural lessons of the Low Countries to English architects competing for the erection of Hôtels de Ville for the flourishing commercial centres of England.

The tale of examples could be extended with a corresponding list of resultant designs. The requirement at home, the precedent abroad, and the enthusiastic designer were coincident, and we thus possess at home abundant concrete illustration of a real and modern architectural indebtedness to our Belgian ally.

The charms of Flanders have not exhausted themselves with the fading of the activity of the Gothic Revival. It is now strangely impossible to imagine a Gothic design winning an important municipal competition; the whirligig of time is so rapid that, while a generation ago nothing but a mediæval County Council Hall could have been a proper pendant for the Houses of Parliament, to us the idea is weirdly belated. But near by is New Scotland-yard—if not Flemish, yet of the Low Countries in its suggestion and waterside charm. The brickwork revival, with which its lamented architect was associated and which happily has not wholly spent itself, is founded both indirectly through its ancient English prototypes and directly through the sketch-books of tourist architects upon the simple fronts which abound in the streets of Flanders. Bruges, Malines, and Ghent are all near at hand, and a short holiday is sufficient to replenish a sketch-book and provide a stock of easily-applied and charming treatments for economical school blocks and of the quaintnesses for which the public have been trained to ask. The lofty churches and famous steeples, such as Antwerp and Malines, have character of their own which perhaps have not directly fed the pencil of the designer, but which are most dear to the artist. Their contents, as a rule, exceed in interest that of the buildings. There is wonderful mediæval woodwork at St. Sauveur, Bruges, and St. Martin, Ypres; Renaissance marble screens, metalwork, and enamelling, as in the tombs of Charles and Mary at Notre-Dame, Bruges—a church which also contains the marble Madonna of Michelangelo. The pulpits are world-famous, and rival one another in realistic fantasy, and, besides, are masterpieces both of technical achievement in sculpture and construction in wood and marble. The sober interests of an archæological parade around the choir of an English cathedral have no comparison with the artistic excitements of the tour round churches like St. Bavon, Ghent, or St. Sauveur, Bruges. The wealth of mediæval painting at the former is represented by Van Eyck's Paradise Triptych, and the masterly Renaissance screens and organ at the latter are memorable and typical of the wealth of the Spanish era. The glories of the later school of Rubens and the grandeur of scale of the Renaissance churches of the seventeenth and eighteenth centuries belong, of course, to Antwerp, Malines, and Ghent, and probably rise to every artist's mind instinctively as first in especial recollection.

The potent influence which the municipal buildings of Flanders have exercised over our own architecture in recent years was ephemeral, but the many charms of Flemish art remain powerful, varied, and constant. The surge of war is now over the provinces, destroying and sparing in its unreasoning fits of fury, making dreadful history upon its buildings under our eyes. These monuments have been the artistic inheritance of European civilisation as a whole, but as a whole it has manifestly lacked the power to prevent their danger or destruction. The success of the Allied Armies, the speedy reoccupation of Flanders and Brabant, and their restoration to their rightful ownership afford the only hope for the preservation of what remains to us of their marvellous buildings and works of art, and its early achievement is the prayer of all lovers of the unique inheritance of these provinces.

NOTES.

A Fortunate Discovery. SOME two years ago the Society of Dilettanti presented to various institutions spare copies of steel plates from the folio volumes in which they had from 1769 to 1840 published the results of the Ionian expeditions sent out by the Society; but, having disposed of their stores, they came upon a parcel which contained original drawings of architectural subjects, together with proof engravings from nearly sixty plates. As these were supposed to be plates from published volumes, the Society offered them to the Royal Institute of British Architects, and the plates and engravings were exhibited in the rooms of the Institute in 1913. While they were on exhibition Professor Lethaby discovered that the plates, though engraved as long ago as 1830, had never been published, and the discovery was communicated to the Society of Dilettanti, a search through whose archives revealed the fact that these drawings, made by the members of the Second Ionian Mission in 1811, were to have been published as a companion volume to Part III. of the "Antiquities of Ionia," which was issued in 1840. The project was apparently delayed by the death of William Wilkins, R.A., who acted as architectural expert to the Society, and was also editor of the work. The plates have been fortunately rediscovered, and are to be issued in book form, Professor Lethaby being the editor. The new volume will be known as Part V., being a supplement to Part III., and will deal with the great temple of Artemis at Magnesia, and with monuments at Myra and other Lycian cities. It will probably be published in February.

The Arrangement of the Victoria and Albert Museum. A LETTER to the *Times* calls attention to the fact that the necessity for moving original and costly specimens of metalwork to secure parts of the museum has made the collections which remain more attractive and of greater educational value, the collections on view not being overweighed with duplicates, triplicates, and trifling originals. The writer says that the range of historical illustration of goldsmiths' and silversmiths' art is wider than hitherto and more in evidence, including Greek work dating from 1500 to 1000 B.C. to mediæval and Renaissance examples. All the objects are reproductions, facsimiles of originals belonging to other countries, which could be replaced if destroyed. The writer very reasonably suggests that, as the object of the South Kensington Museum is an educational one, good copies are of infinitely more value than poorer originals, and that a similar process of revision and rearrangement might profitably be carried out by the authorities during the war. The suggestion is an admirable one, and will, we hope, be considered by the authorities. We might add that the model of Wren's first design for St. Paul's, of which we give photographs in this issue, should be repaired and placed in a suitable position in South Kensington, since it probably has more interest to Englishmen than any architectural exhibit in the Museum, while it can only be examined with difficulty in its present obscure position.

Inspectors of Munitions. WE notice that questions have been asked in Parliament as to the qualification of those engaged by the Government to act as inspectors of munitions, and that considerable astonishment and some dissatisfaction were expressed at the result of the inquiry. It is not to be wondered at perhaps that the Government were unable to agree to lay down any hard-and-fast line on this question. There is a sense in which it may be said that the greater part of our national efforts are being carried on by amateurs or by men hastily trained for this special work. It is obvious that the Government must have a free hand to avail themselves of the services of teachable men, whatever their antecedents may have been. But we think we are right in saying that in such matters as the inspection of munitions, and the finer and more accurate work connected with their production, it has been found that men of superior education and quickness and delicacy of perception are better in many important respects than those who have spent their lives in the usual routine of mechanical production. If the Government require the services of such men they cannot do better than engage those architects whose work they have stopped by direct administrative action. Architects are accustomed to work to scale and have an appreciation of accuracy, and should, we think, be found more suitable for this work than most other men of equal education.

Stonehenge. THE local Secretary for Wilts of the Society of Antiquities writes to the *Times* on the subject of Stonehenge. Any other Government, he says, but an English one would have seized the late opportunity of acquiring it. The writer is probably right as to this, since smaller Druidical monuments in Brittany have the inscription "Property of the State" affixed to them, but we question whether Stonehenge would be safer if it were so protected. Under the present law we believe the stones cannot be removed or used as in past ages for building material, and it hardly seems if this is so that they are exposed to any other dangers than those of time and the effects of weather. There are no mouldings or carvings to be damaged, and the worst that can happen is that a few may scratch their initials on one of the monoliths. We are naturally glad that it is not within the power of anyone to use them as building material as they were used in former centuries, but we think it may in this case be possible to carry antiquarian zeal and enthusiasm somewhat too far.

LEON BATTISTA ALBERTI AT RIMINI.

The little town of Rimini* on the Adriatic, one of the five towns of the ancient "Pentapolis Maritama," is open, brisk, and healthful to the traveller, offering a pleasant contrast at some seasons to the more marshy climate of Ravenna, and recalling the liveliness of Treviso or Pavia. Like its sister towns of Fano, Pesaro, Sinigallia, and Ancona, it is of Roman foundation, and, while its massive arch of Augustus is of capital importance as a relic, it also possesses the rare privilege of a well-preserved Roman bridge, spanning the River Marecchia on the north side of the town. Bridge and arch are in association, but at opposite ends of the Via Augusto, so that we have, in effect, a veritable Roman way.

In its Cathedral of San Francesco, however, Rimini possesses another monument of much greater significance in the history of Art. It is in the centre of the town, and can be approached direct, but the force of contrast is greater if one turns aside to it from the principal street and spies it suddenly at an angle, looking for all the world like a third Roman fragment, but grander and more impressive than either of the others. Here we are in the heart of the Rimini of the early and middle *Quattrocento*, which belonged body and soul to the fiercely vivid family of the Malatesta. Their house, the Castel' Malatesta, is to be found on the walls at the west of the town, but modern military necessities have obscured its original purpose; it is San Francesco, cathedral and monument in one, that is stamped all over with the personality of the greatest of their race—that Sigismondo Pandolfo Malatesta who patronised art and learning, but turned aside at times in a white heat of passion to make the streets of the town run with blood.

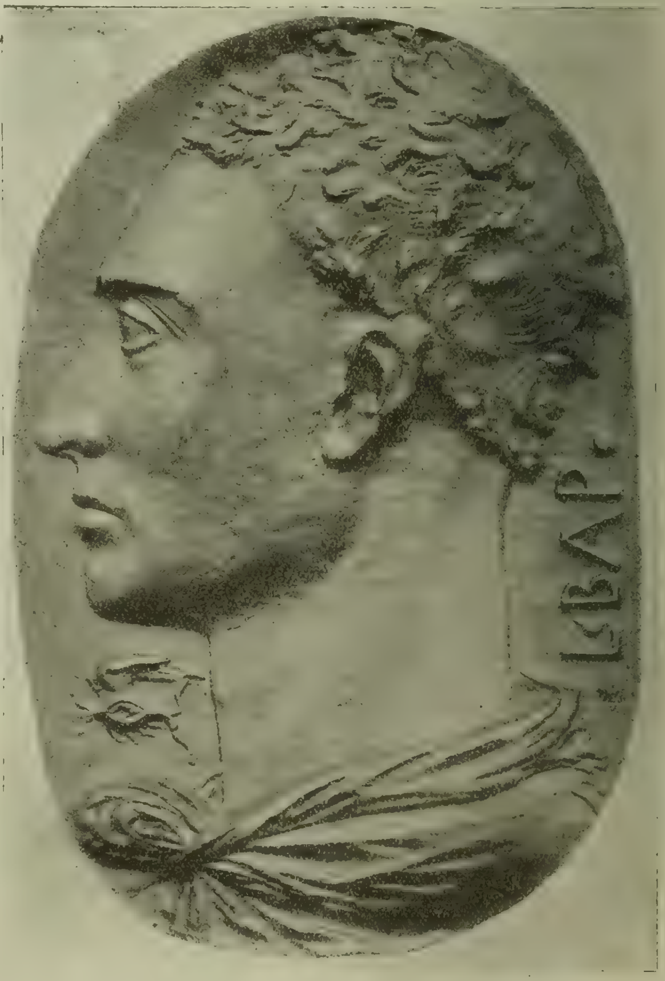
If there is perhaps no association of town and despot more vivid to us than that of Rimini and the Malatesta, immortalised in Dante's vision, there is certainly no happier relic of those fierce times of emperor, pope, and *condottiere* than the barn-like thirteenth-century church, transformed by the genius of Leon Battista Alberti into a notable monument of the Renaissance. Alberti was an outstanding giant in the early time of the new classical outlook, and this church is one of his greatest works. On account of it, and of three other later works—the façade of Sta Maria Novella at Florence, the Palazzo Rucellai at Florence, and the church of Sant' Andrea at Mantua—the scholar of noble family and author of a learned treatise on architecture who was responsible for them is alive to us as an architect combining those rarest of qualifications—large grasp and extreme refinement. Further, if we had to choose one work of them all by which to compare him with his fellows, it would probably be the church at Rimini.

Alberti takes his place in the history of the Italian Renaissance as the third great pioneer in architecture. Born in 1405, twenty-six years after the advent of Brunelleschi, he lived till 1472, or three years before the birth of Michelangelo, and his career thus spanned a most important part of the fifteenth century. He was at his prime in the very middle of that epoch, beginning his work at San Francesco apparently about 1446—the year of Brunelleschi's death and a few years before the birth of the elder Antonio and Giuliano da San Gallo. Bramante was born in 1444, so that, broadly speaking, we see two great periods defining themselves—the first represented by Brunelleschi, Michelozzi, and Alberti; the second by Bramante, the San Gallo, and Cronaca. Yet a third and culminating period is identified with architects to whom the foregoing were leaders, conspicuous among whom were Peruzzi, Sanmichele, Sansovino, Michelangelo, Raphael, and Giulio Romano. With regard to Alberti, in the twenty odd years that elapsed between the rebuilding of San Francesco and the erection of Sant' Andrea at Mantua, the delicate pilaster style which he himself inaugurated at the Palazzo Rucellai had its day and disappeared, its principal exponent being Bernardo Rossellino, whose career ran curiously parallel with that of Alberti, and who may have begun by working under him at Florence. That Rossellino was a man of ability we can see from his authentic buildings at Pienza, though the extent of his influence outside that town is rather a vexed question. With this possible exception, Alberti appears to have founded no direct school,* just as he owed very little to the work of his immediate predecessors.

His most mature work—Sant' Andrea at Mantua, which was uncompleted at his death—may well have exercised a profound influence on later church buildings. The whole conception of the plan and structural form of this great church, which was more than 110 yds. long inside, stamp it as the work of a man who was master of his art, who was accustomed to think in a large way, and who was a constructor as well as a theorist. The broad pier treatment of the Mantuan church, with its recessed chapels and coffered barrel vault over the nave, got right away from the columnar basilican plans produced by Brunelleschi at San Spirito and San Lorenzo at Florence; while its great porch, well over 100 ft. wide, anticipated the mature work of Bramante as well as the soaring creations of Michelangelo. Alberti's line of development was not so much that of the early Christian basilican churches as the more important Roman buildings with their vaulted ceilings carried on massive structure.

Such an output of work as Alberti's, though limited, is sufficient to stamp a man as pre-eminent. Architects can claim him for their confraternity as one of the foremost even in an age of splendid building. Is it more amazing, or less, that we find the man behind this work almost comparable to Leonardo in versatility, of magnificent physical gifts, a profound student of law, music, and mathematics, taking to architecture, in fact, only when his health broke down? We are not really concerned with the answer, since his building work was of such enduring quality. For that we are content to take him as he stands, yet he must be given a prominent place in any survey of the Italian Renaissance in the widest meaning of that great time. In the finest medallion portrait* we have of him, with its nobly-proportioned head, its eager sensitive face, we seem to see one of the most princely personages of any age.

It has been said already that San Francesco at Rimini is a monument as well as a church. This is so in fact, as, besides being constructed in honour of Almighty God, it is a veritable casket containing not only the structural relics of the earlier church, but of all that Sigismondo Malatesta could possibly do to assure future ages of his existence. The exterior, which is of marble, is uncompleted at the east end, but Alberti evidently intended to make an entire building of it. The façade exists, as well as the side walls, 6 ft. thick, which cover the Gothic walls, and are pierced with round-arched openings to suit the earlier windows, the lines of the main entablature and base being continuous, so that the remodelling is no mere elaborate frontispiece and plain building behind, but a homogeneous creation. These openings,



Leon Battista Alberti.

From a cast in the British Museum of the original medal in the Dreyfus Collection.

(By kind permission of Messrs. Duckworth & Co.)

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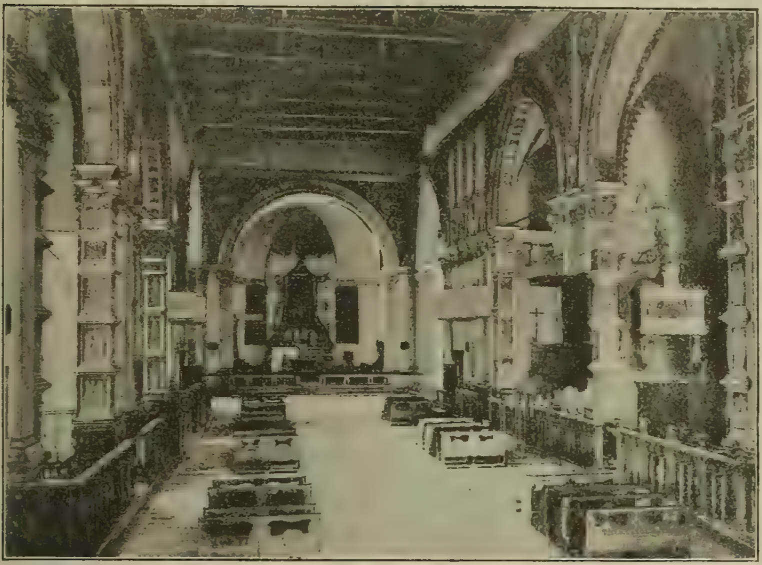
* At the time of writing dangerously liable to Austrian attacks by sea or air.

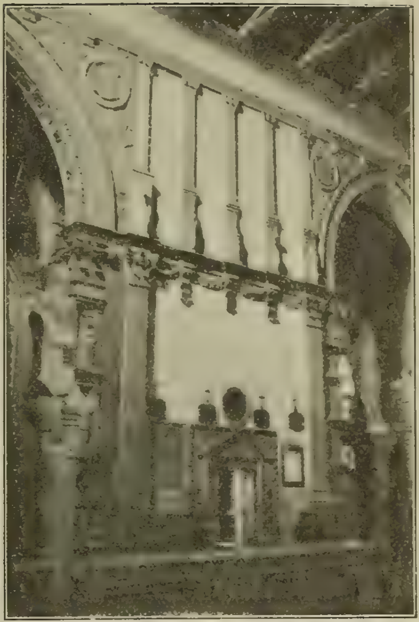
* His connection with Rossellino is a matter of interest. Perhaps Alberti may have designed some buildings which Rossellino carried out. A passage in Vasari seems to suggest as much, though Vasari appears to belittle unduly Alberti's constructive ability.

* There is a cast of this in the British Museum, the original being in the Dreyfus Collection. Mr. G. F. Hill, following Heiss, considers it was probably executed by Alberti himself. (See Hill's "Pisanello"—Duckworth.) The writer's acknowledgments are due to Mr. Hill and to Messrs. Duckworth for the reproduction.

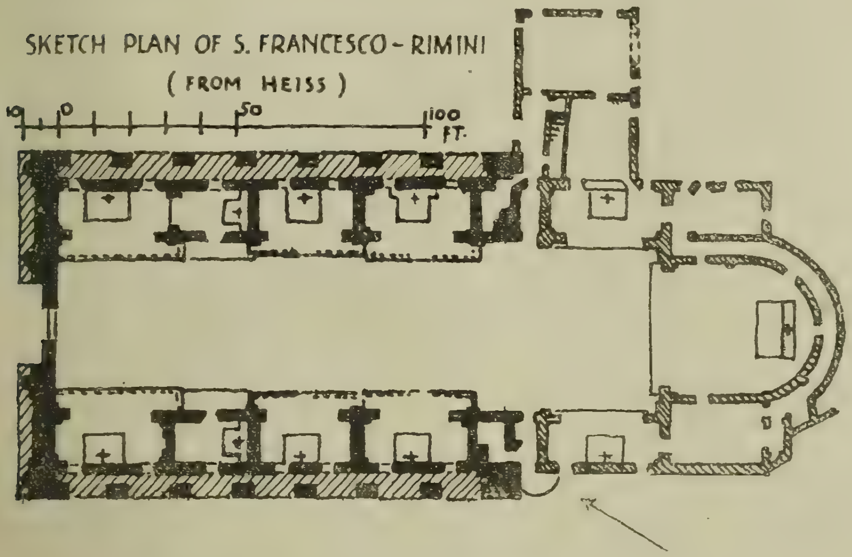


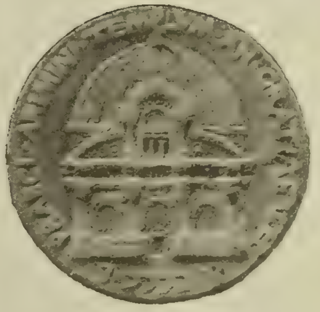
[V. Farneti, Rimini.

S Francesco, Rimini: Interior, looking East.

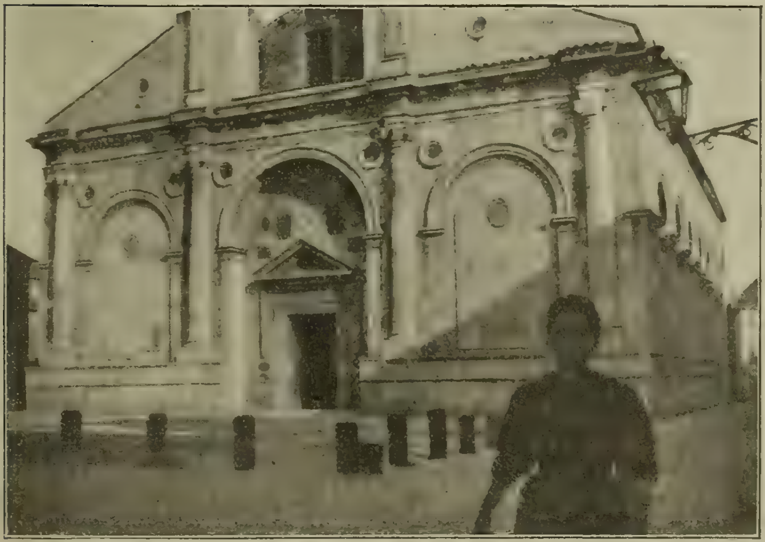


S. Francesco, Rimini: Interior, North Side showing door to enclosed chapel.

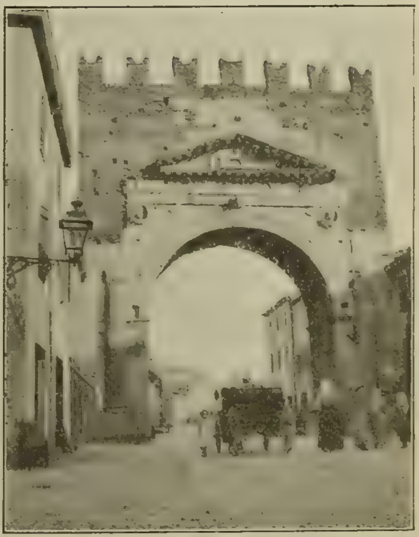




Cast of Medal by Matteo de' Pasti (c. 1450), showing front of S. Francesco, Rimini.



S. Francesco, Rimini: Façade.



Arch of Augustus, Rimini.

on the south side, contain sarcophagi—a device, whether of patron or designer, which embodies a fine idea and emphasises by a master-stroke the whole meaning of the restored edifice. What, indeed, could be more complete in every sense than this recurring potency of monument thus associated with the structure of the whole? One of the sarcophagi contains the bones of an ancient scholar of renown, brought back reverently from foreign lands by Sigismondo.[*]

The façade conforms to the prevailing type employed, both in earlier and later work in Italy, the ultimate Renaissance version being fully foreshadowed by Alberti at Sta Maria Novella.[†] Here simple straight slopes at the aisle roofs take the place of the scroll-like endings of the Florentine church. The upper structure of the front is incomplete, but the intention of the designer becomes clear if we study the commemorative medal of Matteo de' Pasti, struck in 1450.[‡] Pasti, besides being an accomplished medallist, seems to have been a useful man in other respects. We gather that he and some others acted as assistants or clerks of the works to Alberti, and may have materially assisted him with the execution of the design.[§] The medal was made with such nicety and attention to detail, and is so accurate in its representation of the lower part of the building, that we can safely accept its accuracy for the whole without question. We learn, therefore, that the roofs of the aisles were to be finished with bow-curves, and that the existing recessed imposts of the crowning central feature carried a semicircular arch, and above that a pediment. We should have inferred this finish from the analogies of both Sta Maria Novella and Sant' Andrea. The dome which overtops the pediment in the medal was evidently intended by Alberti over the crossing.

In its general impression the façade as it exists to-day is so big, so simple, and so grand that one hardly realises it is just that of an ordinary Italian church of rather more than average size, with 6 ft. or so tacked on at each side for the thickness of the new walls. In his fine use of the applied columns Alberti may have been working on the idea of the Roman archway in the town,[||] and one can see a reminder of its circular-framed spandrel busts in the stalwart wreaths of the spandrels of the church façade, which are repeated on the sides at about the same level. At any rate, the front is certainly Roman in spirit, with a new importation of thoughtful, caressing, lavish detail. One feels that in England no one could have done such a front but Inigo Jones, perhaps no one in Italy but Alberti. There is, indeed, a similarity in the work of the two men. The wealth of beautiful design in the carving of the podium at San Francesco reminds one of the balustrade reliefs at Pergamos, but the masculine detail of the column caps, the vigour of the mouldings, and the fine treatment of the great doors are characteristic of the English master.

The exterior of San Francesco would alone render it one of the most interesting pieces of work in Italy, but there is also, fortunately, a remodelled interior for which Alberti must be held responsible. Here the problem was difficult, as without entire reconstruction the Gothic character of the original structure was bound to be more insistent. It was allowed to remain of necessity, but was so lavishly classicised that on entering it is at once apparent that one is inside a Renaissance temple and not a mediæval church. The hand of a master is evident, however. By means of a rich and practically continuous line of high railing to the chapels, and a frieze-band above the pointed arches—both associated at the east end with the round-arched opening to the sanctuary—base and horizontality are given to the delicate Renaissance trappings on pier and wall, which are added with infinite skill. Large romanised capitals are inserted at the imposts, but they are tempered by the finely broken-up panelled piers and a wreathed decoration in the spandrels which makes them throb with life. The pilasters on the main piers forming the lower order are completely elegant and full of proportion to their surroundings. The upper pilaster treatment is worthy of Brunelleschi at his best, and one need say no more. There is not only an unswerving sense of scale and a mastery of graceful detail in all this, but the evidence throughout of a large and daring mind.

Noticeable features are the detail of the altar railings, crowded with marble colonnettes—the braggadocio of the donor, whose name is carved large on every arch with the inscription that he, "Sigismondo Malatesta, did this"; while the little side doors with low relief marble medallions and panels are as fine *Quattrocento* work as any existing. The greater part of the carving and sculpture work throughout is of the very finest quality, colour being freely introduced after the manner of the Della Robbia. To quote Symonds:—"Allegorical figures designed with the purity of outline we admire in Botticelli, draperies that Burne-Jones might copy, troops of singing boys in the manner of Donatello, great angels traced upon the stone so delicately that they seem to be rather drawn than sculptured, statuettes in inches, personifications of all arts and sciences alternating with half-bestial shapes of satyrs and sea-children—such are the forms that fill the spaces of the chapel walls, and climb the pilasters, and fret the arches in such abundance that had the whole church been finished as it was designed it would have presented one splendid, though bizarre, effect of incrustation." The work certainly deserves the most careful study for itself, apart from fuller investigation as to authorship. It is said that Ciuffagni and Agostino Antonio di Duccio, of Florence, took an active part in it.[*]

The theory that Alberti himself had no part in the decoration of the interior[†] is a narrow one, and from external evidence alone appears to be quite contrary to fact. Apart from the architectonic grip of the interior, it is clear, from what we know about the man, that he would take ascendancy over others in any design with which he was associated. Between 1446 and 1461 he must have been often, though not constantly, in Rimini, and his fertile brain would have conceived not only such essential design as exists, but the entire remodelled structure. It is, of course, possible that he ultimately intended to cloak completely the Gothic structure of the interior, even to the extent of rounding the pointed arches; and by running a barrel vault through the whole length of the structure, pierced by transepts and a dome at the crossing, make an entire Renaissance church of it. We are certainly told that he made a model, whether or not this showed the construction of the interior.

The church, however, was never completed. Sigismondo Malatesta, who died in 1468, appears to have got into difficulties about it in 1461,[‡] and for some years previous to that date the work evidently proceeded slowly. We are therefore left with a fragment, stamped outside with classic fervour and inside with the spirit of the *Quattrocento*. In the field of mediæval classicism Alberti obtained a different result in the great west front of Sta Maria Novella, but he was Roman in his outlook, though the work in the interior of San Francesco may have influenced the strange and beautiful ecclecticism practised after his day in Lombardy—seen to perfection in the lower part of the Certosa at Pavia, and in Sta Maria della Grazie at Milan. He certainly had his reward in achieving, in Sant' Andrea, Mantua, a greater conception of interior than the Lombard churches ever arrived at. In the Palazzo Rucellai he was working to more rigid conditions, which had been laid down, partly, by his predecessors. The "Tempio della Malatesta" is less bound by stereotyped lines, and if it does not constitute such a great creative whole as Sant' Andrea, enough may have been said to show that it should be a pilgrimage church to the student.

Our portfolios are overhauling the monuments of the past, but so far it has not been the fortune of the writer to have seen any studies of this church. It can only be hoped that if it escapes the havoc of war we shall see, in time, a fine illustrated monograph of it by a British student. THEODORE FYFE.

[⁂ Some of the photographs which we give in connection with this article were taken by Mr. Fyfe.—ED.]

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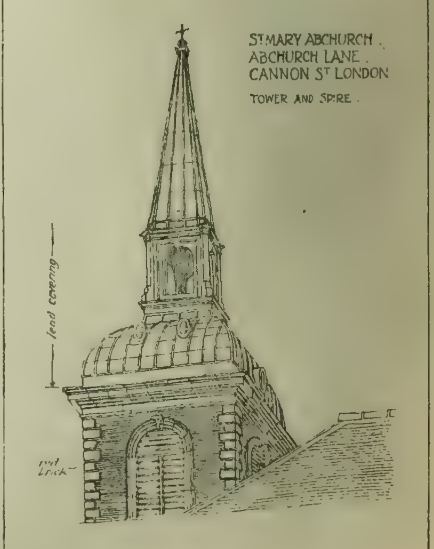
THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

IT was fortunate that the Great Fire of London did not occur at an earlier date, for, instead of the world-famed group of Renaissance churches built by a great genius, we might have had a number of tentative hybrid efforts like the church of St. Katherine Cree, which, though interesting historically and archæologically, would have been in no sense so great a contribution to our architectural history, and probably would not have been marked by the sense of proportion and dignity which distinguishes the "Gothic" churches of St. Michael, Cornhill, St. Mary, Aldermanbury, and the spire and tower of St. Dunstan-in-the-East, poor as those works are beside the Renaissance churches of Wren. Great epochs in architectural history are frequently short-lived, and, although the scholarship of the Renaissance was better understood in later ages than in the time of Wren, we feel as we examine the work of even those men who came under the immediate influence of the master that the incomparable mastery of form and mass possessed by him was feebly echoed in the work of Gibb, Vanbrugh, Archer, and the lesser men who followed. Wren possessed a magnificent sanity of mental outlook, of which we find little evidence in such churches as St George's-in-the-East, St. Anne, Limehouse, or St. Paul, Deptford; while St. Martin-in-the-Fields, St. Giles-in-the-Fields, and St. Mary-le-Strand form an intermediate group finer than what was to follow, but less poetic and resourceful than the work which had preceded them.

Wren, like other of the great men of architectural history, was not uniformly successful, and, while he gave us the steeples of St. Mary-le-Bow and St. Bride, combined them with dull and tame interiors; yet there is hardly a church which he built which either from the beauty of its interior design or external treatment



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[*] J. A. Symonds, "Italian Sketches," etc

[†] W. J. Anderson, "The Architecture of the Renaissance in Italy."

[‡] The author is indebted to Mr. G. F. Hill for use of the cast of this medal.

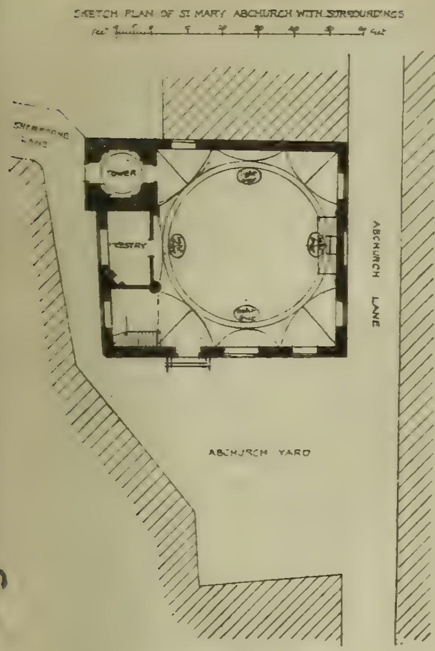
[§] Thieme and Becker's "Lexikon."

[||] W. J. Anderson.

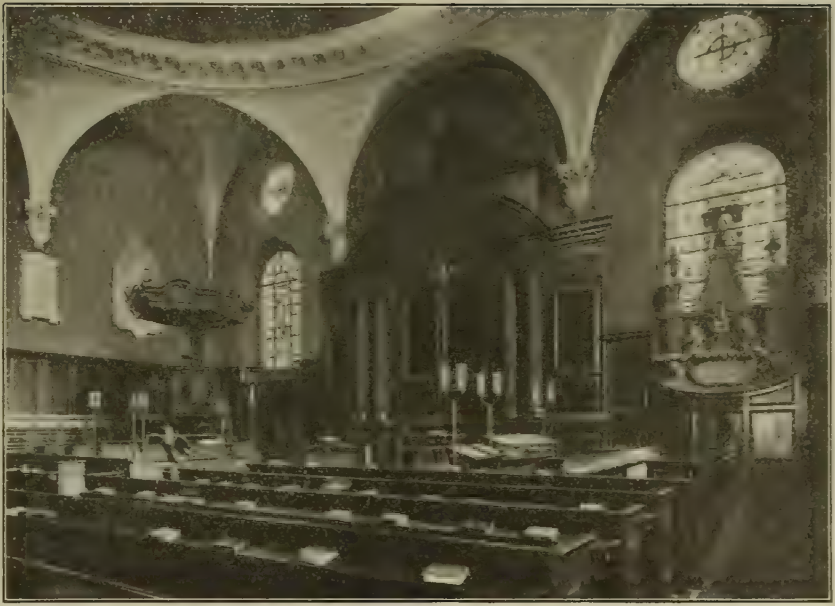
[*] Thieme and Becker. Symonds thinks that some pupils of Donatello and Benedetto da Majano worked at it. He must be wrong about the latter, as he was not born till 1442.

[†] Thieme and Becker.

[‡] A. Heiss, "Les Medailleurs de la Renaissance."



St. Mary Abchurch.



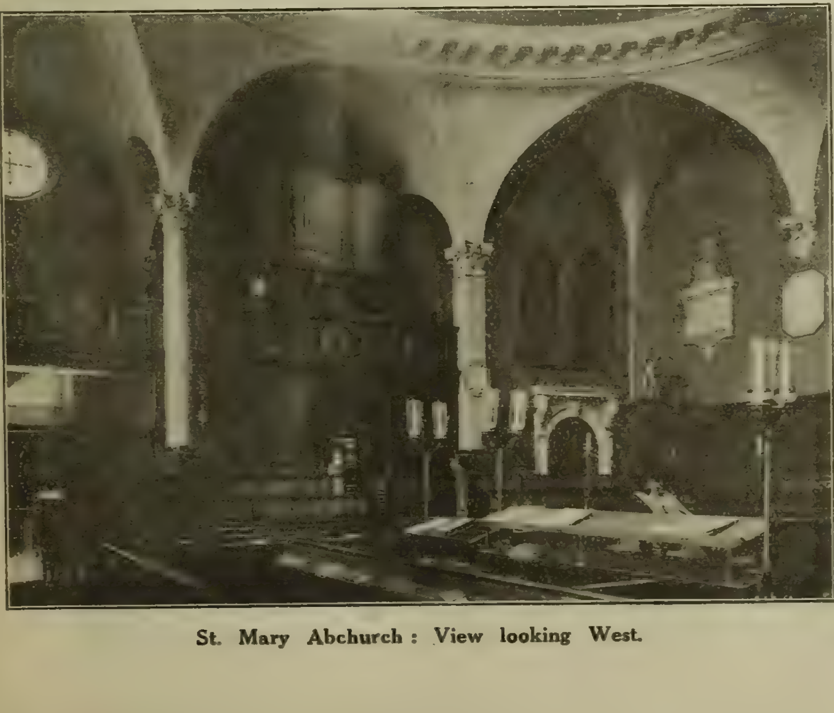
St. Mary Abchurch: View looking East.

does not charm the lover of architecture and appeal to the instinct of beauty which most of us possess. No great architect in this or any other country so fully considered economy of materials and construction; we feel he might have been constrained by an economical employer, whereas his work is the outcome of a nature at once gifted and modest, one who seems to have felt it his duty to obtain the best possible result in the simplest and most economical manner, in striking contrast to many of his foreign contemporaries, who freely divorced themselves from practical requirements in their indulgence of their æsthetic conceptions. Occasional lapses from a standard of good taste are what only can be expected from one who acquired his architectural knowledge late in life, and who gave us the astonishing variety displayed in Wren's erections. Hidden away among masses of houses, in cramped positions and restricted sites among narrow lanes, the greatest of English architects always contrived what has given to a city more immense than he ever dreamed of its abiding charm and interest. So the churches of London form museums where we can study the story of the English Renaissance, sanctified by the memorials of the dead who in their generation have helped to build up the nation of to-day, and it is to be hoped that their stones will remain monuments too precious to be sacrificed for improvements or for commercial gain. We shall, in the following months, give a short description of each church, illustrated by sketch plans, showing the surroundings, sketches of the towers and steeples, and, as far as possible, by photographs of the interiors or in some cases of portions of external or internal detail.

No. I.—St. Mary Abchurch.

The church of St. Mary Abchurch is situated in Abchurch-lane, near to its southern end in Cannon-street, and closely surrounded by adjoining buildings except on the side which faces Abchurch-yard, which was originally the burying-ground of the church, its boundaries being still marked by posts.

The advowson of the rectory of the former church belonged in ancient times to St. Mary Overy, Southwark, but at a later date was bestowed by Queen Elizabeth on the Master and Fellows of Corpus Christi College, Cambridge, in whose gift the living has since remained. After the Fire the neighbouring church of St. Lawrence Poultney was not rebuilt, and its parish was united with that of St. Mary Abchurch.

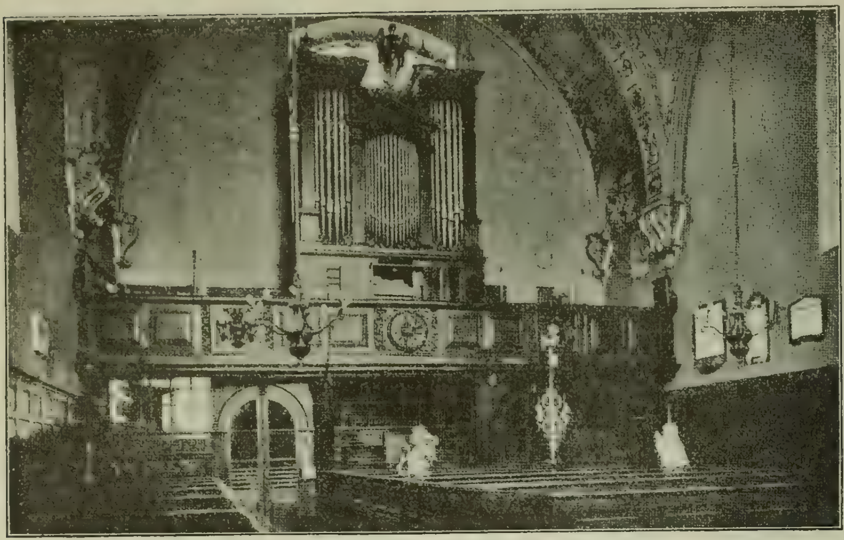


St. Mary Abchurch: View looking West.

The present church was rebuilt by Wren in 1686, and is among the smaller City churches, covering a space of a little over 60 ft. in each direction. The external treatment is simple, no attempt being made to obtain architectural effect or even symmetry, everything but the tower which closes the narrow vista of Sherborne-lane being absolutely utilitarian in character. The tower, with its curious ogee roof surmounted by a spire, is not among Wren's happiest efforts; but, on the other hand, the interior is one of the richest and most beautiful of London churches. The organ gallery, altar-piece, pulpit, pews, and door-cases are unusually rich and beautiful examples of design, and there is much admirable carved work by Grinling Gibbons. The font, which stands beneath the gallery, is surmounted by a carved oak cover with figures of the four evangelists; the pews in the westernmost of the centre block display the City arms, and the Corporation pews against the west end have elaborate sword rests. The high pews along the north and south walls are an unusual and picturesque feature. Among many monuments is one to Sir Patience Ward, a noted politician and Member for the City of London in the Convention Parliament of 1688-89, while another elaborate monument is that of Edward Sherwood.

The dome was painted by Sir John Thornhill, and its dark colour, combined with the deep red walls and painted glass, somewhat detract from the effect of an interior which would bear ampler lighting and a more subdued scheme of decoration. The treatment of the interior, with its dome resting on plaster pendentives, is extremely happy; the whole giving an idea of spaciousness and warm richness which render it one of the most successful of Wren's interior designs.

The manner in which the internal setting out is effected is very characteristic of the period, forming a middle stage between the irregularity of mediæval days and the exact accuracy of a later date. Wren, as in most of his smaller churches, showed his disregard of right angles. None of the outer walls, which probably mark former boundaries, are at right angles to one another. Nor is the central space reduced to a square, and, in addition, the dome is not centrally spaced between the north and south walls, so that the pendentives have unequal projections. The angle of the tower is marked by a pilaster, the corresponding support being formed, as at St. Swithin, by a single free-standing column, the windows cut into the bays between the pendentives without regard for exact centre lines. But the most unfortunate feature is the treatment of the pendentives next each angle, which form an awkward mitre where they intersect



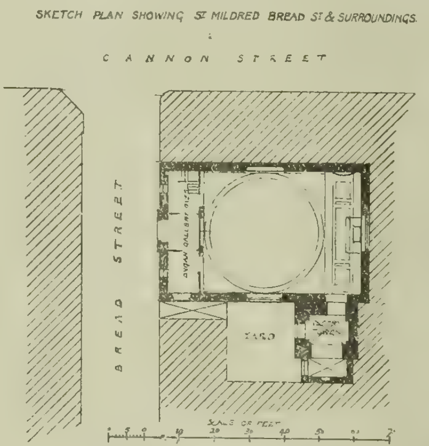
St. Mildred, Bread-Street: View looking West.

causing distortion from many points of view, which are minor defects in a conception of great beauty and imagination.

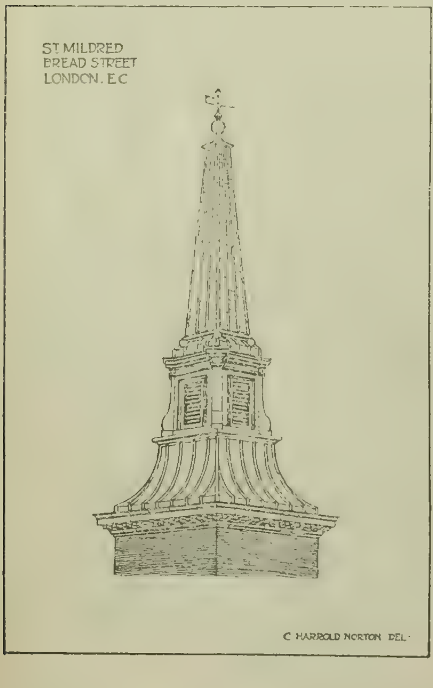
No. II.—St. Mildred, Bread-Street.

The church of St. Mildred, Bread-street, with St. Mary Abchurch and St. Swithin, form a group in which a dome or lantern covers most of the area of the church, while in a second group, to which St. Mary-at-Hill, St. Martin, Ludgate, and St. Anne's and St. Agnes, Aldersgate, belong, the plan consists of four columns with a centre feature consisting of a dome or groined crossing. St. Stephen, Walbrook, stands alone, as in it the same idea is carried out on a much more extensive scale.

St. Mildred is hemmed in by lofty buildings, which, in conjunction with the narrowness of Bread-street, prevent its slender lead-covered steeple, set back over the vestry, from being visible except from the upper parts of adjoining buildings. The front to Bread-street, though symmetrical and architectural, possesses no special points of interest. The interior is one of the most beautiful of all Wren's churches, and, if it shows less invention than St. Mary Abchurch, is characterised by greater refinement and finish. The rectangular plan is divided into three compartments, a central domed space resting on pendentives, and a bay at either end covered by an arched and panelled ceiling. In the centre of each face was a segmental headed window, three of which remain, that in the north wall having been blocked up; the east window opening is filled with stained glass, presented by the Rector, the Rev. Canon Adam Glendenning Nash, M.A., and his brother, Prebendary J. Glendenning Nash, and representing the Ascension. The window is excellent in character, and a refreshing contrast to many of the windows which destroy the harmony and character of Wren's other churches.



St. Mildred, Bread-Street.



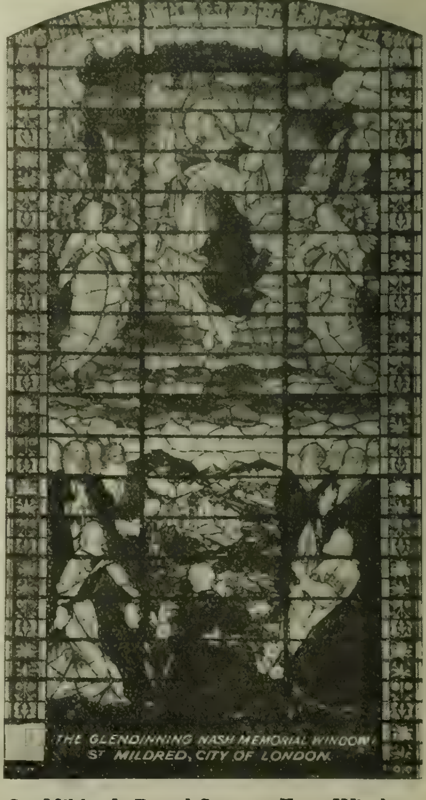
The pews remain in their original condition, and with the pulpit and organ gallery are among the finest examples of contemporary woodwork. Unlike many of the City churches, while the fabric has been carefully preserved, nothing has been done which destroys or obliterates the beauty of the design. It is frequently suggested by many writers that various City churches, especially St. Stephen, Walbrook, were "studies for St. Paul's," but consideration of the different nature of the problem set will make this seem an impossibility. Wren's churches are simple and small, depending for the most part on arrangements of single columns; while St. Paul's, like most great buildings, is a composition of piers, vaults, and structural domes. The justly famed interior of St. Stephen, Walbrook, would rather remind us in plan of some of the Spanish and Eastern mosques than any other ecclesiastical structure known to us, and the suggestions made recall the efforts of imagination which see in the vistas of a forest the prototype of the Gothic church rather than the deductions of balanced reason. The vestry contains an exceptionally valuable and beautiful Communion plate, dating back to Edward VI., Elizabeth, and Charles I., and with the very exquisite white marble font and oaken altar-table was fortunately preserved when the former church was burnt down.

The rectory was originally in the gift of the prior and convent of St. Mary Overy, Southwark; but since the days of Henry VIII. the patronage has been in private hands, and in the seventeenth century the advowson was in the gift of the Crispe family, one of whom, Sir Nicholas Crispe, who was knighted for his loyalty after the Restoration, presented the church with Communion flagons and font in Charles I.'s reign. The parish was united with that of St. Margaret, Friday-street, which was not rebuilt after the Fire. The present church of St. Mildred was rebuilt and opened in 1683.

WREN'S FIRST DESIGN FOR ST. PAUL'S.

The success of the greatest men is usually chequered by failures which seem, to them, more important than to a posterity which is ignorant or forgetful of their aims. The works of Wren are the glory of the London which we know and are proud of; but what London might have been had his magnificent plan for its lay-out been accepted we can only partially picture, and the Cathedral Church of St. Paul, which may well be termed the crown and culmination of English architectural achievement, is a success built over the grave of the most cherished hopes and ideals of a great architect. In the glory of what is we fail to imagine adequately what might have been had the opposition of the Commissioners of St. Paul's and Court prejudice been overcome. Only Wren's model remains, together with a few engravings and illustrations, and when the numerous alterations and divergencies from the accepted scheme are remembered, and allowance is made for the fact that the drawings of Wren's age are tentative diagrams, we may be partially able to realise what Wren's favourite design would have gained in the process of execution.

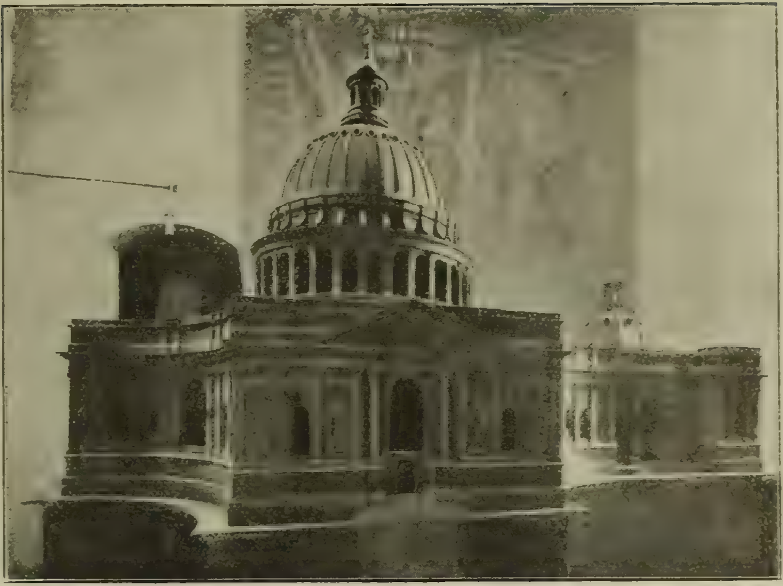
The magnificent and poetic *motif* of a dome ringed round with a number of smaller ones, and the beauty of the geometrical plan, more than counterbalance the skill of the manner in which Wren translated a mediæval plan into a Renaissance equivalent. No effects of light, shade, and form in the existing building could have compared with the variety given by the succession of dome and arched opening of the first design. Wren's genius was, by opposition, deflected into a channel in which it lost its full


THE GLENDINNING NASH MEMORIAL WINDOW, ST MILDRED, CITY OF LONDON.

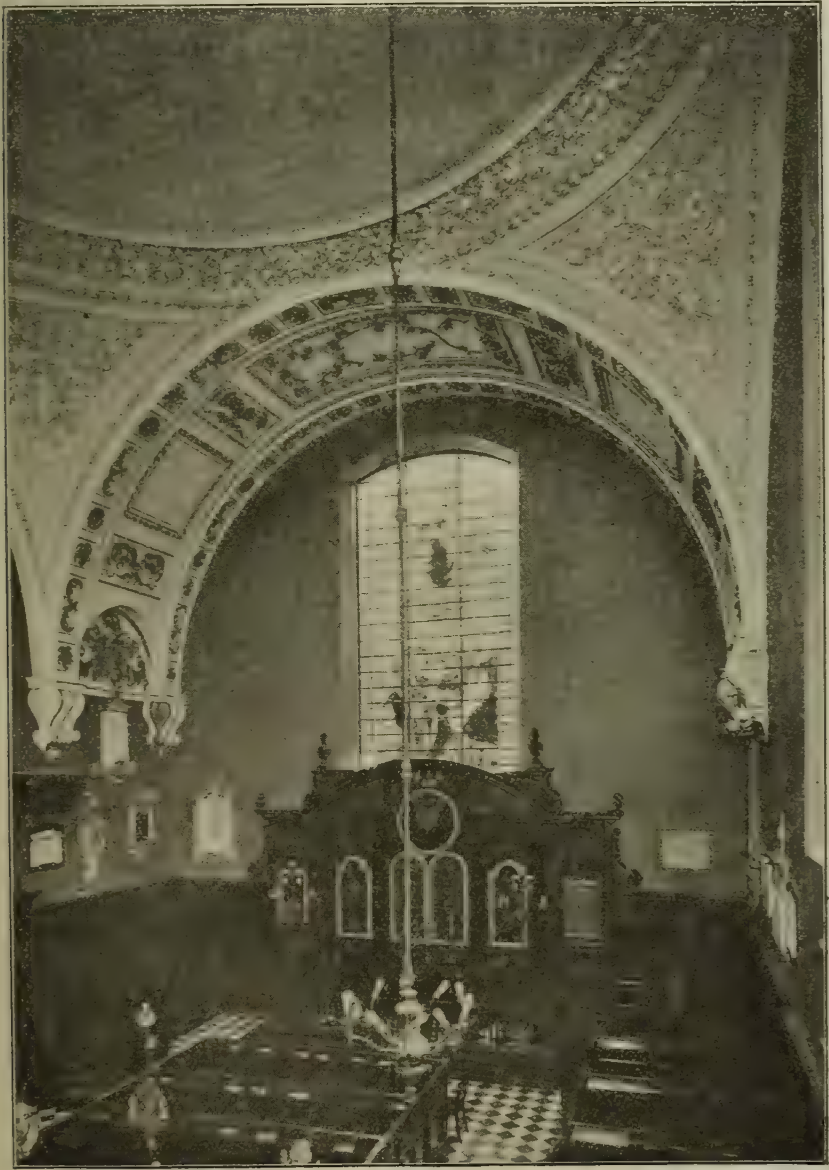
St. Mildred, Bread-Street: East Window.

force by restriction of opportunity, with the result that the ingenious devices by which such difficulties as the thrust of the vaults, the discordance between interior and exterior were met, not to mention the structure of the internal and external dome, have become a battle-ground between those who somewhat importunately urge that architecture should be "clothed construction" and others who do not preface a logical defence by the admission that it is preferable to avoid any such expedients without loss of architectural effect. In short, while there is no necessity for an internal and external feature to correspond, we may reasonably be glad that it is possible to make them do so, and in Wren's favourite design this correspondence would have been an exceedingly close one. Many of the criticisms made by those who judge of the scheme from drawings are dispelled by a study of Wren's model. The great dome is set back almost at an equal distance from all faces of the church except the west extension—which may be described as a narthex rather than a nave—and would have been given its full effect. Fergusson alludes to the concave curves which connect nave, transepts, and choir as being disturbing to the repose and quiet grandeur of the building; but the treatment is seen to be justified by the model. The objection to the treatment of the elevation by "plastering it with a series of gigantic and useless Corinthian pilasters" is a criticism which might be applied to the present Cathedral, as well as to many of the great works of ancient Rome and the Renaissance masters, and is hardly germane to the matter under discussion. The point about which most doubt may reasonably be expressed is as to the effect of the second external dome which "surmounts the nave"; but this might have justified itself in actual execution, while it cannot be considered an essential feature of the design which would have been actually carried out, any more than the extraordinary features of the "Warrant" design were. Other critics regret the absence of the campaniles of the first design, but they might well have been developed from the plan in execution, being as much suggested by the plan as by that of the executed design. In fact, if we judge by the difference between the "approved draughts" and actual buildings of the time a great mass of the criticism levelled at this design becomes meaningless, while the broad contention that Wren's judgment in this and other matters would have been justified by results appears to become a reasonable hypothesis. The most practical criticism of the plan, that it was in some ways ill-adapted for its purpose, as the high altar could only be seen from about half the area of the church, is a more serious one, though less so than would have been the case either in past or subsequent ages of the history of the church. The criticism of the exterior treatment of the rejected design, with its one Order and attic, is based, first, on the omission to recognise that whatever may be lost in the substitution of a single Order for the two in the existing building, the former is a logical expression of the interior, while the other is not; and, secondly, in the failure to recognise that the suggested treatment is only a groundwork on which Wren would have worked, probably with a result which would have defied criticism. The criticism that the dome of the rejected design would have been overwhelming in effect raises the question of what our aim should be in the design of a domical church. In Sta Sophia the dome, with its two semi-domes, constitutes the church, yet we do not say it is overwhelming. To a large extent the dome in Wren's first design constitutes the Cathedral, everything else being grouped round it and subordinated to it. It is not a central feature so much as the church itself, and, being so, it may reasonably and properly dominate the whole group to an extent which would be inappropriate in the case of the present dome, which may be termed a central feature marking the crossing. Wren's design in reality forms an intermediate stage between buildings of the type of St. Paul's and St. Peter's, in which the dome is the most important feature, and structures like the Pantheon and Sta Sophia, in which the dome constitutes the building itself, so that criticism which may apply to the typical historical Cathedral of the West becomes inapplicable, and we have to free ourselves from the memory of mediæval precedent before we can judge of the result dispassionately. Lovers of the Renaissance are frequently more influenced by the Gothic traditions in matters of form than they think—a fact which colours our opinions on ecclesiastical architecture.

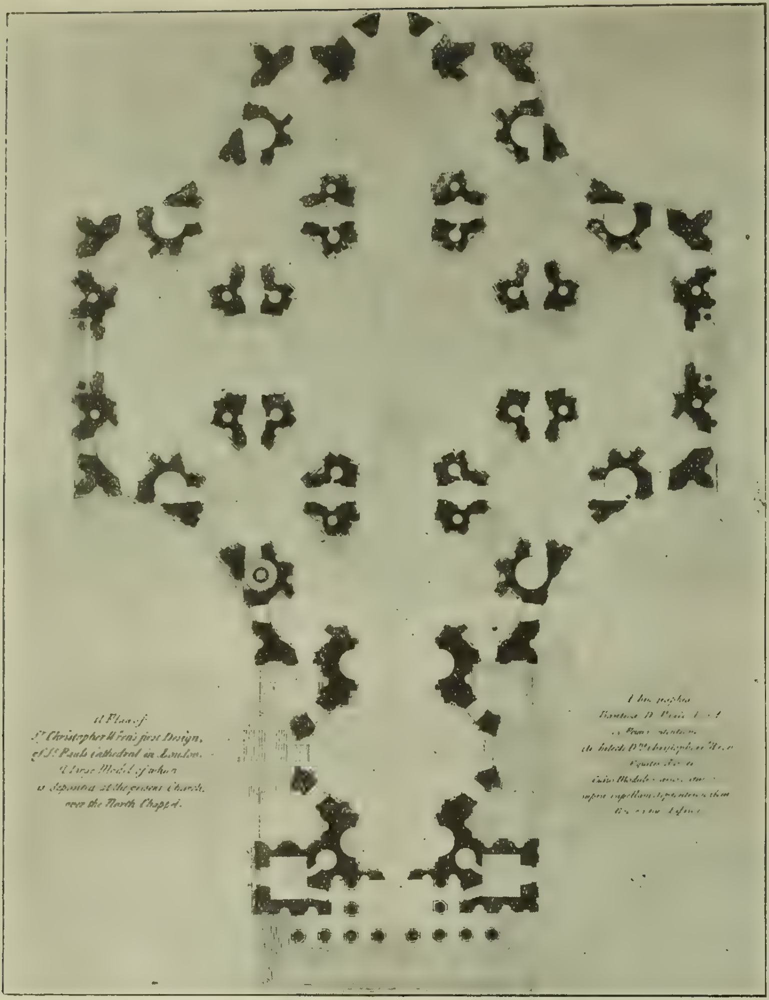
Apart from this criticism, authorities have generally been in agreement in their recognition



Wren's Model for St. Paul's (First Design).



St. Mildred, Bread-Street: Interior looking East. (*See page* 8.)


A Plan of
Sr Christopher Wren's first Design,
of St Pauls Cathedral in London.
A large Model of which
is deposited at the present Church,
over the North Chappel.

Wren's First Design for St. Paul's.

that the internal effects of the rejected scheme would have surpassed those of the present Cathedral. It was, in fact, a completer break with mediævalism, and rested on the fuller adoption of the principle of the dome instead of that of the vault as the dominating *motif*. The existing building is a vaulted church with a central dome—a Renaissance version of Ely; while the rejected design departed as far from existing precedents as Wren's City churches do from their mediæval prototypes. Despite the criticisms which have been made by authorities, and with full recognition of the debt we owe to a great genius, we feel that his own individuality pointed the way to the fullest realisation of the full possibilities of the art of architecture employed by a master, and that the epitaph, "Si monumentum requiris circumspice," might have had even greater meaning had it been inscribed in the building of Wren's own choice instead of the existing Cathedral.

◆

HOUSING CONFERENCE AT GLASGOW.

Eight hundred delegates attended the first Scottish National Conference on Housing held in Glasgow on the 3rd inst. under the auspices of the local Labour Party Housing Committee. The Chairman, Mr. William Gallagher, of the Scottish Co-operative Society, characterised the stoppage of the house rent increases as a great victory for working-class solidarity. Dr. Chalmers, Glasgow Medical Officer of Health, said the quickest way to cut down the price of land in the cities was to cut down the height of tenement houses. The time had come when the abolition of the apartment houses should be considered. Councillor Wheatley said the famine in houses in Scotland could be traced in a measure to combines among manufacturers of building materials. Private building enterprise had failed. He outlined a labour scheme for free State house-building grants.

GENERAL NEWS.

Appointment.

Mr. Arthur F. Holden, Deputy City Surveyor and Engineer, Coventry, has been appointed Borough Surveyor and Engineer to the Corporation of Hereford.

Deceased Architect's Estate.

The late Mr. Arthur Rowland Barker, of Grove House, the Green, Southgate, Middlesex, who died on October 26, and was for more than forty years architect and surveyor to the diocese of Winchester, has left estate of the gross value of £27,859.

Collapse of West-End House.

The roof of No. 28, George-street, Hanover-square, a three-story building, fell during a gale a few nights ago, and the whole of the interior of the building down to the ground floor collapsed with the weight of the falling *débris*.

The Surveyors' Institution.

The next ordinary general meeting of the Surveyors' Institution will be held in the Lecture Hall of the Institution on Monday, January 10, when a paper entitled "Some Notes on Reinforced Concrete" will be read by Mr. R. M. Kearns (Fellow). The chair will be taken at five o'clock instead of eight o'clock.

Carpenters' and Joiners' Evening Classes.

A protest against evening classes where carpentry and joinery are taught has been made to the Executive Council of the Amalgamated Society of Carpenters and Joiners by some of the members. They complain that partially-skilled lads and young men use their knowledge gained at these classes to secure work at reduced wages.

The Building Trades, Berlin.

It is stated that the Berlin Chamber of Commerce in its yearly report claims that, except in the building trades, the situation at the end of 1915 is more satisfactory than anybody expected a year ago.

Dominions Offices in the Strand.

We understand that the Governments of New South Wales and South Australia have authorised their respective Agents-General in London to enter into negotiations with the London County Council and the Duchy of Lancaster for the acquisition of a joint lease of certain property in the Strand, near Savoy-street, as a site for Government offices for the two States named. The property referred to adjoins the new offices of the Western Australian Government Agency, and is of an area sufficient to allow of the erection of offices thereon for the accommodation of both the New South Wales and South Australian Agents-General and their staffs.

Art Treasures and Aircraft Raids.

The *Times* understands that the Office of Works recently summoned a conference, which was attended by representatives of the Admiralty and the War Office, and to which the directors of the great museums and art galleries were invited, to consider whether any further steps could be taken to safeguard national monuments against aircraft raids. The naval and military experts present unanimously agreed that no public building could by any structural device be protected against attack by bombs. Steps have, however, been taken to protect as far as possible the chief art treasures of the country. The care of ecclesiastical buildings actually in use was specially excluded from the control of the Office of Works under the Ancient Monuments Consolidation and Amendment Act, and all responsibility devolves on the Dean and Chapter or other ecclesiastical authority.

Steel Huts in the War Zone.

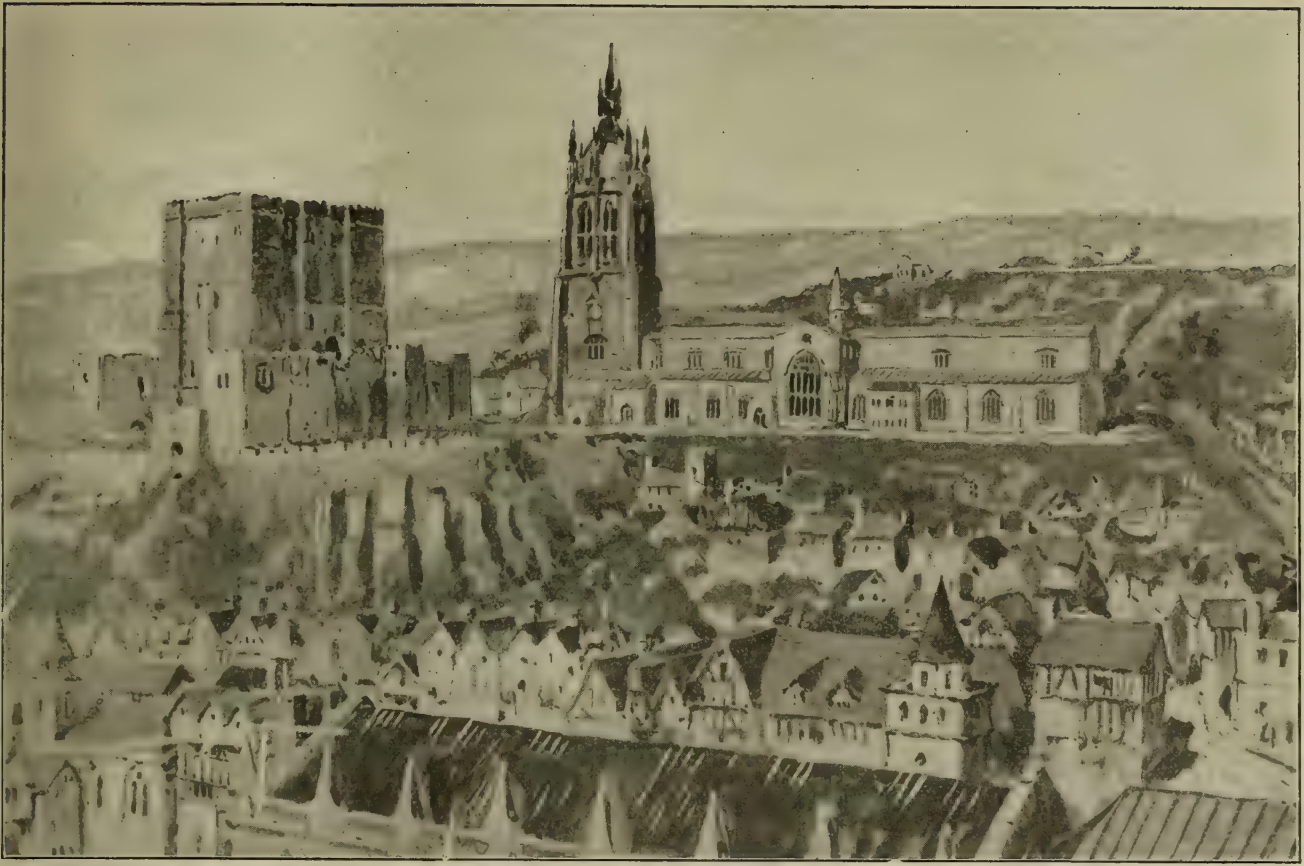
According to American reports the Allied Powers (a report of the British Steel Smelters' Association states) intend to erect vast numbers of portable steel dwelling-houses for the use of the soldiers at the front and also as homes for the inhabitants of territory which has been devastated by the war. It is said that France plans to build 100,000 such dwellings, and other Allied Powers are expected to erect a proportionate number.

Housing Problem, Huddersfield.

The housing problem has become acute at Huddersfield. For some years the rate of building of dwelling-house property has not kept pace with the ordinary increase of population due to the steady growth of industries, and now, in addition to the needs of the other new or expanding industries, provision must be made for the 20,000 or 30,000 workpeople who will be employed by British Dyes, Ltd. The initial efforts of the Huddersfield Corporation to provide working-class dwellings have been almost entirely confined to the substitution of tenement dwellings to make up for the gradual condemnation and closing of the many cellar dwellings. Since the passing of the Housing and Town Planning Act various schemes have been carried out and others have been begun—notably the purchase of the Royds Hall Estate, at Paddock—but their completion has been delayed by the war.

"British Dominions Year-Book."

We have received a copy of the "British Dominions Year-Book, 1916" (1, Royal Exchange-avenue, E.C.), in which we notice several articles of interest, including contributions by Mr. E. Charles Vivian, Mr. Fred T. Jane, Mr. Edgar Crammond, Mr. Edward Salmon, Sir Leo Chiozza Money, Sir Laurence Gomme, Mr. J. Ellis Barker, Mr. H. Massac Buist, Mr. C. G. Grey, Lady St. Helier, and others. Sir Leo Chiozza Money's article shows the opportunity which now presents itself for utilising the resources of the Empire for the benefit of the British people. The "British Dominions Year-Book" is not published in the ordinary way, but will be presented to public and business men and women.



Portion of Model of Old Newcastle.

By Mr. John P. Thorp.

(Presented to the Laing Art Gallery and Museum, Newcastle.)

ILLUSTRATIONS.

Russian Mediæval Architecture.

We give illustrations of one of the historic mediæval churches of Moscow, together with a descriptive article on page 12. The mixture of Asiatic and Byzantine types renders Russian architecture exceedingly interesting, if a little strange to Western standards.

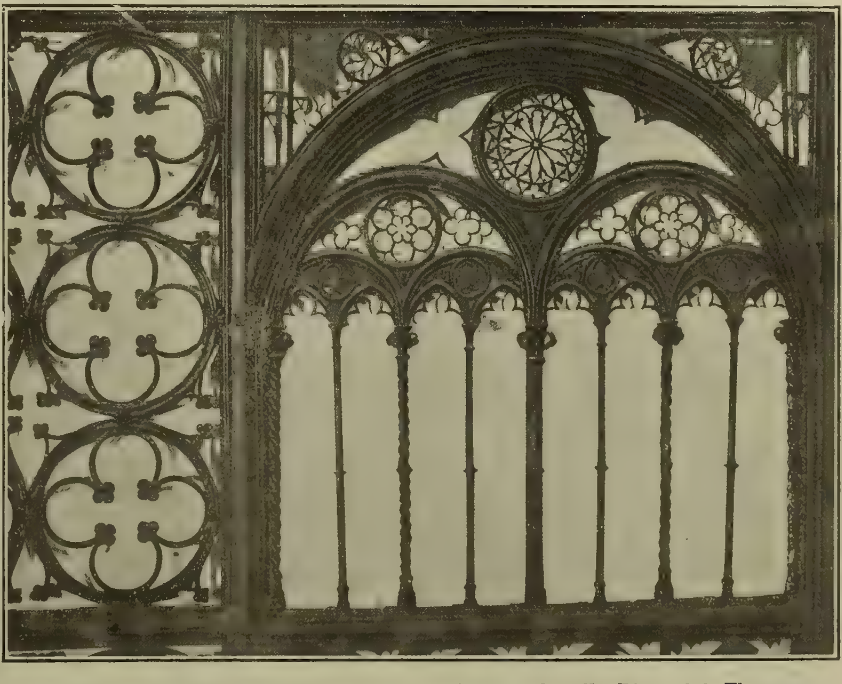
Old Newcastle.

THESE illustrations are from photographs of a portion of a model by Mr. John B. Thorp, of Gray's Inn-road, London, W.C. The model is of Newcastle in the reign of Queen Elizabeth, and shows practically the whole of the town within the city walls. One of the photographs shows the old bridge, and the other the Castle and Cathedral, with the roof of the Customs House in the foreground. The model has been executed to a scale of $\frac{1}{200}$ full size, and has been presented to the Laing Art Gallery and Museum, Newcastle, by Lord Joicey and Mr. John G. Joicey.

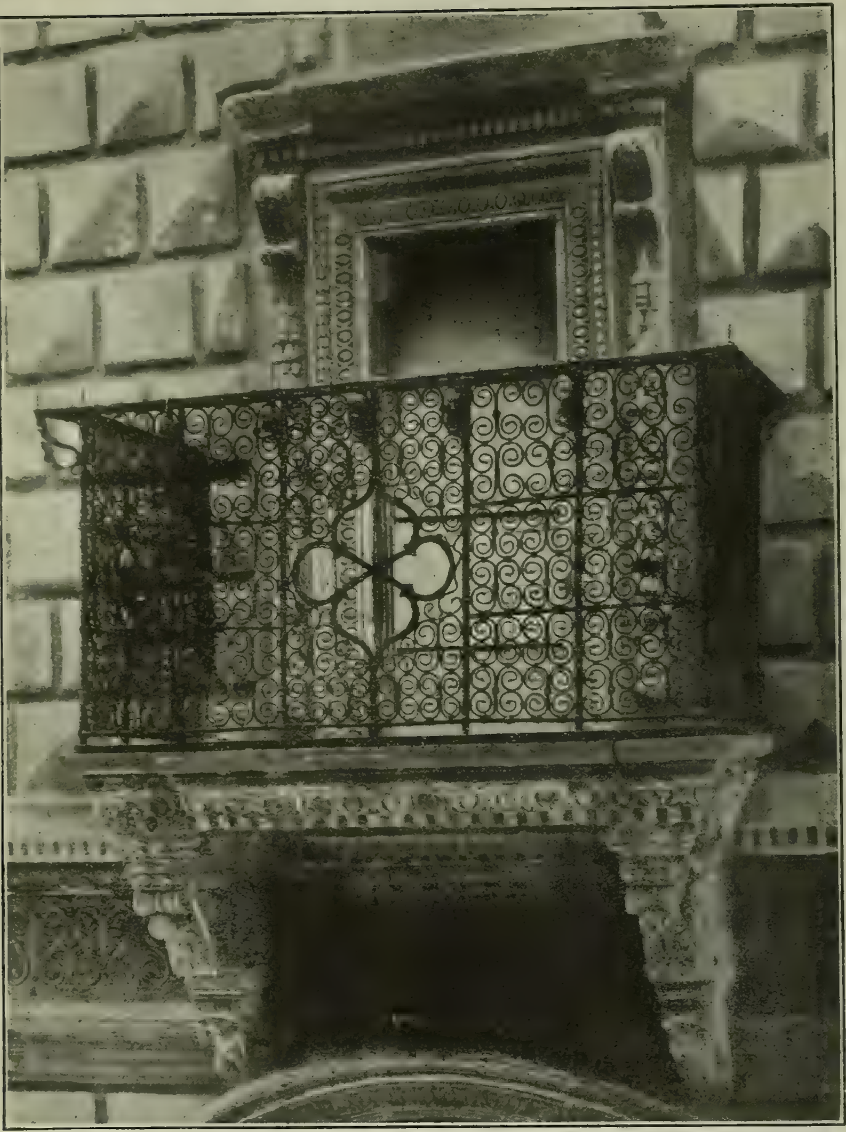
The Emperor Hadrian built the first stone bridge across the Tyne in the year 120. It consisted of stone piers, on which was laid a timber roadway. In 1248 the timber roadway was destroyed by fire and the piers were considerably damaged. The bridge was rebuilt, practically on the same foundations, and finished with stone arches. In 1339 it was very much damaged by floods, and 120 people were drowned. The bridge was covered with houses, as shown in a view dated 1739. The houses not only projected over the bridge, but also encroached upon the roadway. There was only room for goods to go over on packhorses; other modes of transit along the bridge would have been impossible. There were three towers on the bridge—the Gateshead Tower on the south, the Prison Tower near the middle, and the Magazine Tower on the Newcastle side. There was also a chapel on the bridge, mentioned in 1616, called Our Lady's Chapel. The Magazine Gate had a date of 1636 upon it. The bridge, which replaced that of Hadrian, had one great fault: its piers were so wide as to greatly impede the passage of the waters. The bridge originally consisted of twelve arches. When the quays of Newcastle and Gateshead were built three of these were absorbed by the works and the whole body of the waters made to pass through the remaining nine arches.

Old Italian Ironwork.

WE give further illustrations of Italian ironwork, for the greater part of seventeenth and eighteenth century date. Its delicacy and fancy distinguish it from the corresponding work in England and France, while it is usually simpler and less ornate than the work of the Spanish smiths. The want of craftsmanship in smith's work is more needed to-day than in almost any other of the callings connected with building; but, though the revival of



Old Italian Ironwork: Detail of Chancel Screen, Capella Rinuccini, Florence.



Old Italian Ironwork: Balcony, Palazzo Bevilacqua, Bologna. (*See page* 11.)

craftsmanship as a working force appears to be a remote contingency, we have greatly improved on the standards of fifty years ago.

Ocean Marine Insurance Company's Offices.

THE Ocean Marine Insurance Company, Ltd., last year decided to demolish their building in Old Broad-street and to erect the present imposing building. This has been designed by Messrs. Thompson & Walford, of Leadenhall-buildings, E.C., who have given regard to the extreme value of the space here and likewise to the narrowness of the street at this point. It is one of the highest buildings in the City, comprising as it does some ten stories. The façade has Italian granite for the two lowest floors, with bronze enriched openings and Portland stone above.

The building contractors are Messrs. Geo. Trollope & Sons and Colls & Sons, Ltd., Coleman-street, E.C., and the clerk of works is Mr. F. Thomas. The following is a list of subcontractors:—

Steelwork—Messrs. Redpath, Brown, & Co.

Carving—Messrs. H. H. Martyn & Co.

Italian granite and marble—Messrs. J. Whitehead & Sons.

Biancola wall linings and steps—The Art Pavements and Decorations, Ltd.

Lifts—Messrs. Waygood-Otis, Ltd.

Electric light—Mr. F. Geere Howard, who was also responsible for the ventilation.

Electric light fittings—Messrs. Osler and Mr. F. Geere Howard.

Heating—Messrs. Colls & Sons.

Bronze entrances—Messrs. Singer & Co.

Staircase enclosures—The Bromsgrove Guild.

Plaster enrichments—The Bromsgrove Guild and Messrs. Searle & Co.

Casements—The Crittall Company.

Revolving door — Messrs. H. Elliott & Co.

The fire-resisting glass, part of the gun-metal windows, lantern lights, ceiling lights, pavement lights, and stallboard lights were by the Luxfer Company.

Public Trustee Offices, Kingsway.

THIS building occupies a site having frontage to Kingsway, Sardinia-street, and Lincoln's Inn-fields. The elevations are of Portland stone with a granite base to the height of the ground floor window-sills. The plan of the building is in the form of three sides of a square, with a large well for lighting and ventilation in the middle.

In the basement and sub-ground floors are placed the numerous strong-rooms, filing-rooms, storerooms, heating apparatus and pumps, motor-room, etc. The entrance to the building is from Sardinia-street, with subsidiary entrances, which at present are not to be used, in Lincoln's Inn-fields. All the floors except the top floor are practically similar in their arrangement with the principal rooms on the second floor. The whole of the top floor is given over to luncheon-rooms, etc., for the use of the staff. Three passenger lifts are provided, and also small lifts for the quick conveyance of papers, etc. A system of vacuum cleaning pipes has been installed throughout the building.

The purpose for which the building is intended, viz., a block of offices, has been strictly kept in mind in the design and execution of the work. The walls throughout, except in the entrance hall and lavatories, are plastered and distempered. Those of the entrance hall are of "Stuc" material, and the lavatories white glazed bricks. The floors of the rooms are of maple blocks, and those of the corridors and lavatories are of terrazzo. That of the entrance is of marble tiles.

Messrs. Kingerlee, Oxford, carried out the foundation contract, and Messrs. Galbraith Brothers, Camberwell, that for the superstructure. The following is a list of the various subcontractors:—

Wood block flooring—Messrs. Burgess & Co., Liverpool.

Terrazzo—Bell's United Asbestos Company.

"Stuc" work—Mr. H. Tanner.

Marble flooring—Messrs. Anselm Odling & Co.

Steel sashes—Taylor Manufacturing Company, Wolverhampton.

Heating—Messrs. Cannon & Hefford.

Asphalt—French Asphalte Company and Val de Travers Asphalte Company.

Railings—Messrs. Humphries, Jackson, & Ambler.

Wrought-iron grilles and special door furniture—Messrs. Whiteside & Carslake.

Lifts—Messrs. Aldous & Campbell.

Boilers setting—Messrs. Strode & Co.

Granite work—United Stone Firms, Ltd.

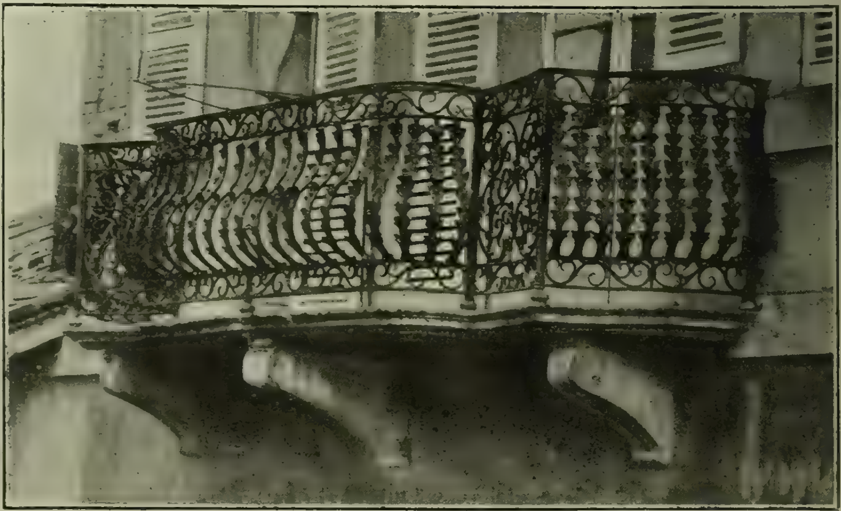
Portland stone—Bath and Portland Stone Firms, Ltd.

Strong-room doors—The Ratner Safe Company.

Vacuum cleaning system — Sturtevant Engineering Company, Ltd.

Metal shelving—Messrs Estler & Co.

The building has been designed by and carried out under the supervision of H.M. Office of Works.



Old Italian Ironwork: A Seventeenth-Century Balcony, Cremona. (*See page* 11.)

New Premises of the Phœnix Assurance Company, Ltd.

THE new premises of the Phœnix Assurance Company occupy a site of about 12,000 sq. ft., with frontages of 37 ft. to Abchurch-lane, 145 ft. to King William-street, and 143 ft. to Sherborne-lane. With so large an extent of frontage the construction of the retaining wall, which was carried out in reinforced concrete, was a matter requiring much time and care. The building itself, which is eight stories in height, including two basements and one story in the roof, is a steel-frame structure, and the floors are on Messrs. Homan & Rodger's system. The staircases throughout are in reinforced concrete, with York stone treads and risers.

The main façade is 78 ft. high. The ground-floor story forms a basement stage, with arched windows and rusticated stonework; the first floor is treated as a pedestal to the Corinthian Order which embraces the second and third floors; while the fourth floor forms an attic above the main cornice. The whole of the front is in Portland stone, worked at Messrs. Trollope & Colls' yard, with the exception of the plinth stones and the central and side entrances in King William-street, all of which are in grey unpolished Aberdeen granite.

The interior of the Phœnix Company's main office, which occupies the central portion of the ground floor, is finished in marble, Piastraccia being used for the wall linings and Campan Vert for the columns and pilasters. This office is dominated by a central feature of octagonal form, which rises through the first floor with an arcaded gallery, and is surmounted by a large dome light, 20 ft. in diameter and 40 ft. above the floor. No little difficulty was experienced in obtaining the necessary supplies of marble, and the building still lacks the marble columns and pilasters in the main office, which have had to be finished temporarily in plaster

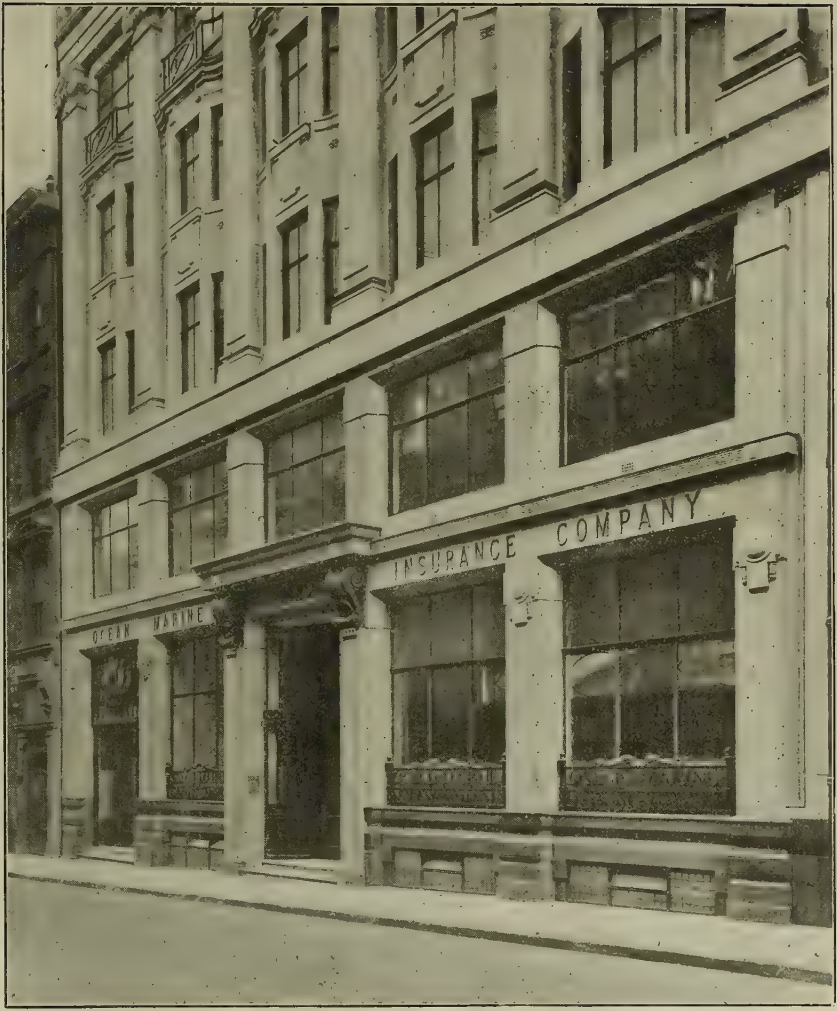
The Phœnix Company itself occupies by far the greater portion of the premises; but five floors from sub-basement to second floor on the portion of the site at the corner of Abchurch lane are leased to the National Bank of Egypt, while the three floors above this are available for letting, as are also a good ground floor office with basement at the corner of Sherborne-lane and other offices approached by a side entrance further up that street.

The electrical work was carried out under the direction of Mr. S. G. Castle Russell, the company's consulting engineer. The lighting is by a semi-indirect system from ceiling pendants, which gives a soft and pleasing effect. No desk standards are used. The heating is by hot water. A system of forced ventilation has been provided in the basements, but the whole of the rest of the building is ventilated by fresh-air inlets behind the radiators and exhaust ducts connected with electric fans on the roof. The two artesian wells, installed under the direction of Mr. Albion T. Snell, have borings 450 ft. deep.

The general contractors were Messrs. Trollope & Colls, for whom Mr. Doust acted as foreman on the works. The building was carried out from the designs and under the direction of the architects, the late Mr. J. Macvicar Anderson and his son, Mr. H. L. Anderson, and much valuable assistance in the planning of the premises and in other directions was received from the company's chief surveyor, Mr. Frederick Izant. The quantity surveyors were Messrs. Franklin & Andrews, of No. 25, Ludgate-hill, E.C., and Mr. H. England, of No. 64, Victoria-street, S.W.; and Mr. A. Nisbet has acted as clerk of works.

The following is a list of subcontractors:—

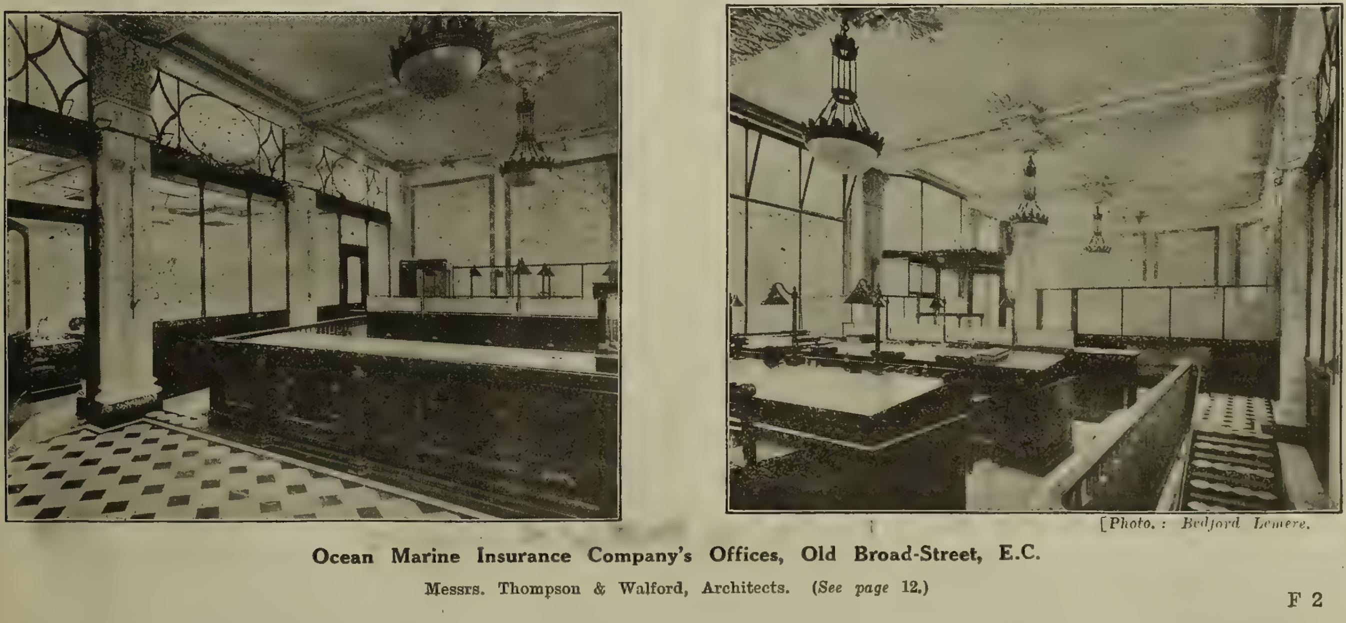
Constructional steelwork and floors—Messrs. Homan & Rodgers.



[Photo.: Bedford Lemere.

Ocean Marine Insurance Company's Offices, Old Broad-Street, E.C.

Messrs. Thompson & Walford, Architects. (*See page* 12.)



[Photo.: Bedford Lemere.

Ocean Marine Insurance Company's Offices, Old Broad-Street, E.C.

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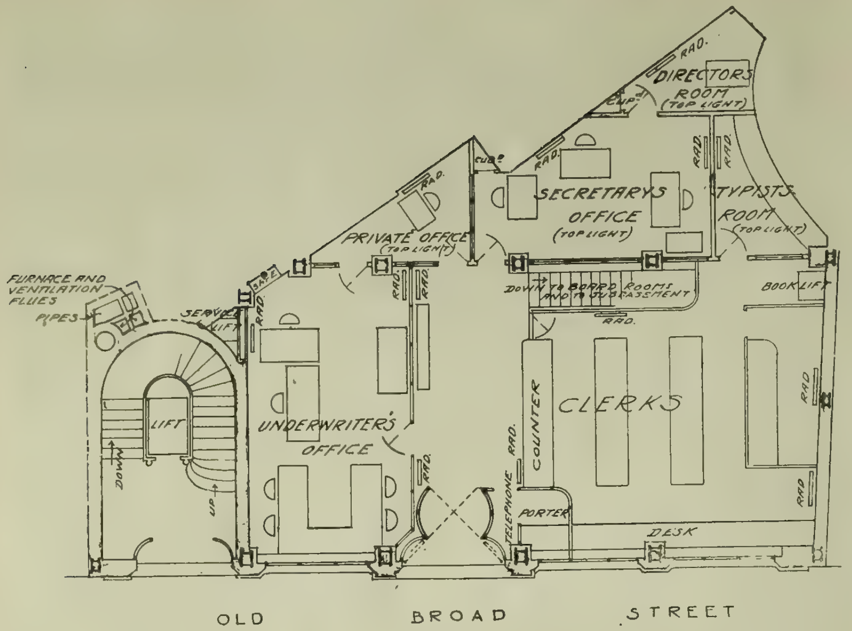

RAD.
DIRECTORS ROOM (TOP LIGHT)
CUP.
SECRETARY'S OFFICE (TOP LIGHT)
TYPISTS ROOM (TOP LIGHT)
PRIVATE OFFICE (TOP LIGHT)
FURNACE AND VENTILATION FLUES
PIPES
SERVICE LIFT
DOWN TO BOARD ROOMS AND BASEMENT
BOOK LIFT
LIFT
DOWN
UP
UNDERWRITER'S OFFICE
CLERKS
COUNTER
TELEPHONE
PORTER
DESK
OLD BROAD STREET

GROUND FLOOR PLAN

Ocean Marine Insurance Company's Offices, Old Broad-Street, E.C.

Messrs. Thompson & Walford, Architects. (*See page* 12.)

Granite work—Mr. John Fyfe, Aberdeen.

Marble work and mosaic floors—Messrs. Burte & Co.

Glazed brickwork and faience work—Leeds Fireclay Company.

Stone carving and bronze "Phœnix"—Mr. C. H. Mabey.

Wood and marble carving—Mr. Geo. Hawkings.

Wood block floors—Acme Flooring and Paving Company.

Chimney-pieces and stoves—Messrs. Shuffrey & Co.

Ironmongery—Mr. James Gibbons.

"Koperoid" windows and steel fittings—Crittall Manufacturing Company.

The large central dome in the main hall of the Phœnix office, also the domes in the office of the Bank of Egypt, the windows to light basement in coppered iron, fitted with electro glazed prisms, all the fire-resisting glazing, and the Luxfer Special Pavement Lights were by the Luxfer Company.

Balconettes and stallboard grilles—Messrs. H. H. Martyn & Co.

Lift enclosures and other ornamental metal work—Messrs. H. W. Cashmore & Co. and Mr. W. Shrivell.

Strong-room doors and steel fittings—Milner's Safe Company and Messrs. Chubb & Sons.

Plaster work, plain and decorative—Mr. James Annan and Messrs. H. H. Martyn & Co.

Wall tiling—Messrs. James Annan and Messrs. Martin Van Straaten & Co.

Drainage and sanitary work—Messrs. Trollope & Colls.

Sanitary fittings—Messrs. Dent & Hellyer.

Glazing—Messrs. Alfred Goslett & Co.

Passenger lifts—Messrs. Waygood-Otis.

Electric lighting, bells, and telephones Messrs. Belshaw & Co. and Messrs. Finch & Wheeler.

Electric light fittings—Messrs. Verity's.

Heating and ventilation—Messrs. Strode & Co. and Messrs. James Slater & Co.

Artesian wells—Messrs. Alfred Williams & Co.

Pneumatic tubes—Lamson Pneumatic Tube Company.

Fire hydrants—Messrs. Merryweather & Co.

Drying the building—Turk System Drying Company.

Wren's First Design for St. Paul's.

WREN's first design for St. Paul's is known chiefly by small and inadequate illustrations in architectural text-books, and we have tried from the existing material to give our readers a better idea of the design than can be usually gathered. The magnificent model of it in St. Paul's can neither be adequately seen nor photographed in its present position in the Cathedral. It should be placed in a suitable position in South Kensington Museum and, we may add, repaired. Our views of it show the columns of the portico as they would appear if the missing ones were replaced. We give a descriptive article on page 8.

The Frieze of the Parthenon.

THESE illustrations are the expression of the author's views as to the original state of portions of the Parthenon frieze.

The height of the frieze is but little over 3 ft. About 290 ft. of its length, which decorated the exterior of the cella of the Parthenon, were recovered from the hands of the Turks and brought to England by Lord Elgin in 1803, and sold to the English Government and placed in the British Museum. A large portion is still in its original place on the southern side of the cella. Some portions are in the Acropolis Museum, Athens; and casts of some of the portions not brought away are in the Louvre and in the British Museum.

The relief of the figures is nowhere much above 3 in. The whole would probably have been fairly perfect to-day had it not been for the bombardment by the Turks in the eighteenth century. The director of artillery was, however, on this occasion a German. Kultur then, as now, was manifesting its value.

At the present moment the portions in possession of the British Museum are carefully packed and consigned to the cellars, in order to protect them from any further effects of Kultur.

A restoration on a minute scale (only 3 in. or 4 in. high) was made in 1829 or 1830 by John Henning. Later, the same artist produced the large restoration which is to be seen on the exterior of the Athenæum Club.

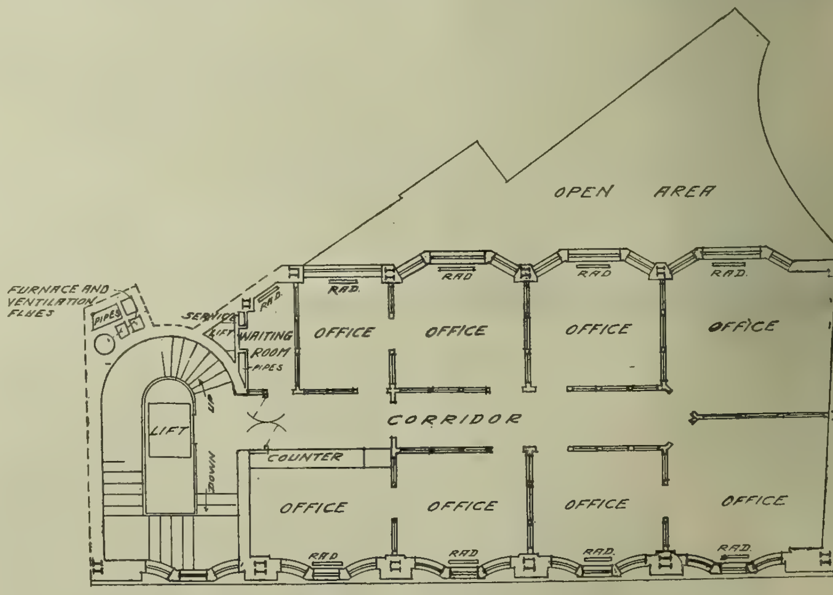
This latter includes, I think, the entire ninety-two groups which formed the frieze when complete. There have, in fact, been several restorations made at one time and another. A modern instance is to be seen at Cardiff in the newly-erected Empire Theatre in that city.

A. C. C.

OLD LONDON BRIDGE AND ITS APPROACHES.

THE subject of bridges is an exceedingly interesting one, as they are a type of building which is often impressive because of the element of size and the juxtaposition of water, for the usual purpose of a bridge is to carry a roadway over a ravine or depression, which in most cases means a stream or river. While other great monuments are generally detached from the requirements of utility, bridges are a necessity, and their appropriate design and decoration become an object of the first architectural importance. In former days bridges frequently carried buildings and covered ways, and there seems no reason why this should have fallen into desuetude, certainly as far as covered ways are concerned, for wayfarers need protection from the storms of wind and rain which sweep along water-courses, and the provision of covered ways would add much to the picturesqueness of our great London bridges at a cost which cannot be considered as excessive, seeing the advantage gained.

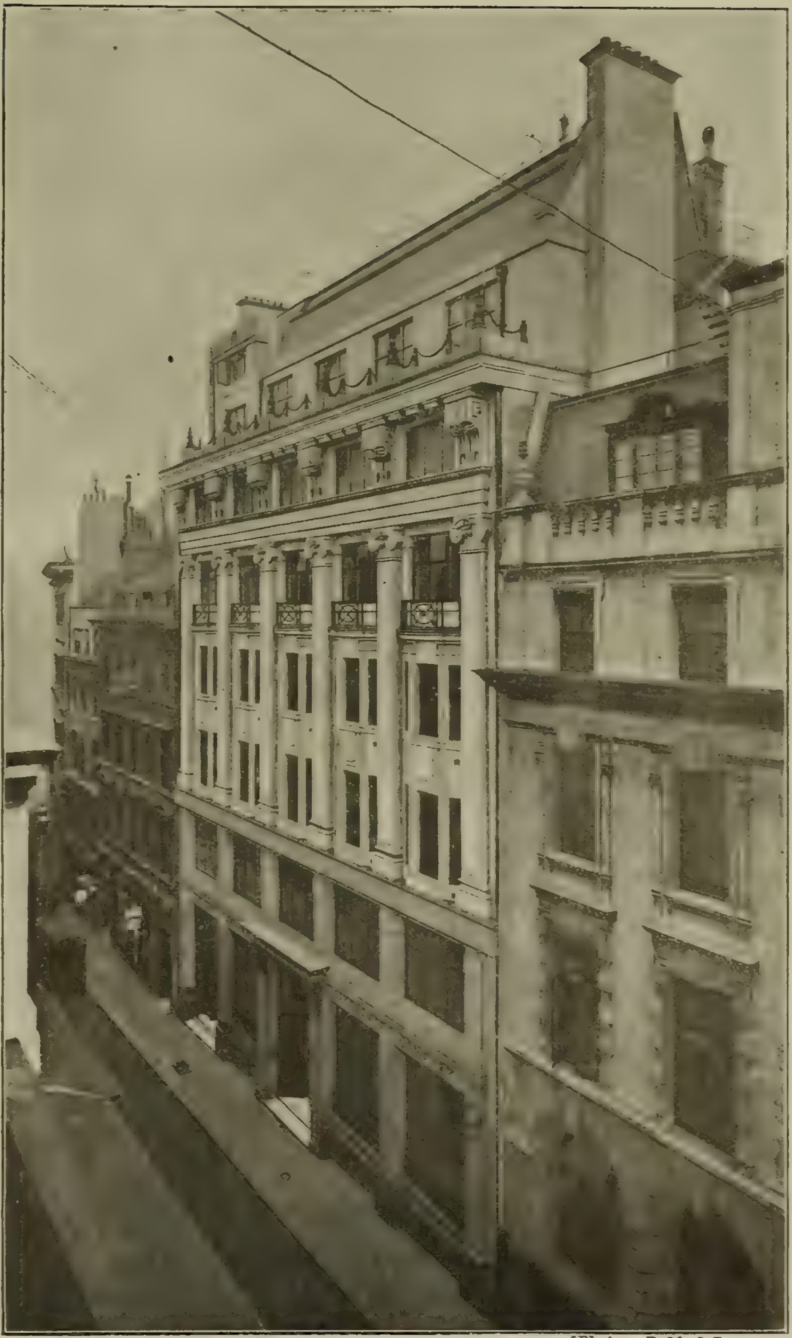
Probably no structure of ancient and modern days, even the Colossus of Rhodes or the Temple of Diana at Ephesus, has aroused more interest and admiration than Old London Bridge, a drawing of which by the late H. W. Brewer accompanies this issue. Wonderful as it was in reality, the description of it, written by a Roman ecclesiastic, who



UPPER FLOOR PLANS
Lavatories & Housekeeper - top floor.

Ocean Marine Insurance Company's Offices, Old Broad-Street, E.C.

Messrs. Thompson & Walford, Architects. (*See page* 12.)



[Photo.: Bedford Lemere.

Ocean Marine Insurance Company's Offices, Old Broad-Street, E.C.

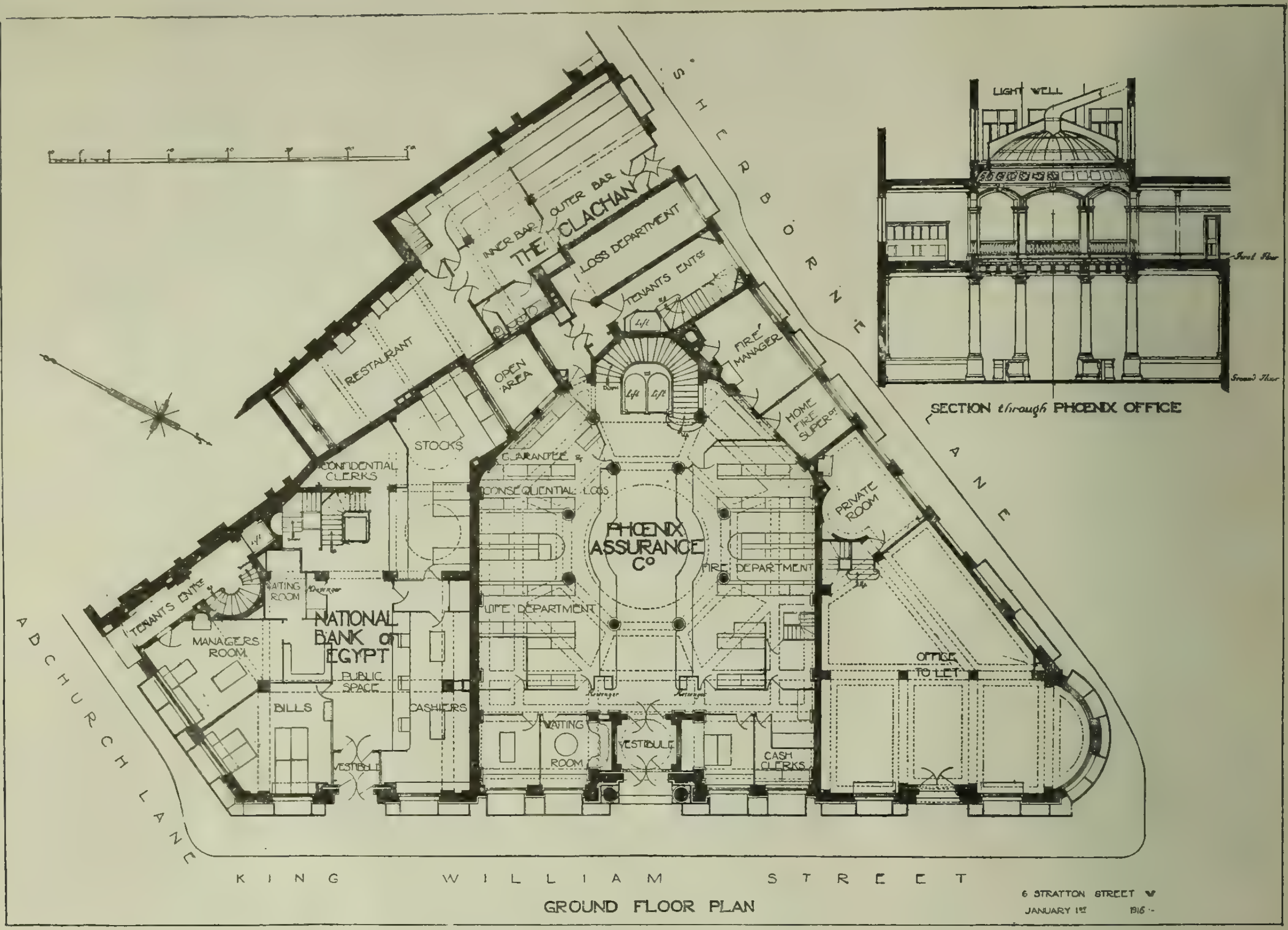
Messrs. Thompson & Walford, Architects. (*See page* 12.)

saw it in the sixteenth century, almost equals the marvels related in the voyages of Sir John Mandeville, and we need scarcely say greatly exaggerates its grandeur. Amongst other things he describes the bridge as being a mile long, 100 ft. high, and crowned with palaces and churches. Although, of course, this is an exaggeration, yet it serves to show what a very remarkable impression this edifice must have left upon the mind of the writer, who, be it remembered, had seen the architectural glories of Italy and those of the "Eternal City." It is fortunately possible for us to recall the appearance of the ancient bridge during almost every period of its existence; the great difficulty, however, in making a restoration of it, is to avoid anachronisms, and to be certain that the various buildings shown were all in existence at the same epoch, for the changes and alterations were very frequent, owing in a great measure to the numerous vicissitudes which befell this structure, especially from fire and tempest. The first stone of "Old London Bridge" was laid in the year 1176, and it was completed in 1206. The architect was a parish priest, who is known as Peter of Colechurch. Whatever defects there may have been in the way of construction, however much the architects and engineers of later centuries, and even of the present day, may have sneered at his primitive ideas of engineering science, yet Peter of Colechurch did what probably no man ever did before or since his time—that is, he built a bridge of stone, nearly a thousand feet long, over a great tidal river, which lasted nearly seven centuries. The bridges erected by his eighteenth-century critics in London have all disappeared, and, if we may judge from the experiences of the past few years, there is little to lead us to suppose that any of the bridges erected in our day are likely to last for even one-third of the time. Although in later times the bridge was covered with houses, yet, as originally erected, the only buildings upon it were two gateways, one at either end, and the double chapel erected upon the eastern portion of the centre sterling. Probably no other buildings of any kind were erected until the close of the fifteenth century. From this time, however, the bridge came by degrees to assume the appearance of a street with breaks at intervals. At the middle of the sixteenth century these intervals between the houses were reduced to three. During the fourteenth century a tower with a gateway beneath it stood upon the seventh pier from the Surrey side, and upon this tower the heads of traitors who had been executed for high treason were exposed. In 1577 this tower was taken down, and the heads and limbs of the traitors were removed to the gate at the Southwark end of the bridge. This Southwark gate appears to have been either partly or entirely rebuilt at that period, and the magnificent structure called "Nonesuch House" was erected on the site of the ancient tower. What was the precise object for which "Nonesuch House" was erected, whether it was a Royal palace or was intended as a residence for the Lord Mayor, we are unable to say. It is stated by some writers to have been composed of timber, wrought and carved in the Low Countries, and floated piecemeal up the Thames. To judge from the representations of it, it must have borne a strong resemblance to the timber houses in Hildesheim and other towns in the north of Germany. Between the Southwark gate and "Nonesuch House" stood another very remarkable house, which was adorned with semicircular bow windows and crowned by a battlement. That this building was of considerable importance may be gathered from the fact that its foundation-stone was laid by the Lord Mayor in state in the year 1577. Probably this building served the same purpose as the present Bridge House.

The pier upon which "Nonesuch House" stood was connected with the next pier to the south, not by an arch, but by a drawbridge, and this drawbridge has given rise to much controversy; for, as London Bridge had nineteen piers, some people maintain that it should be described as possessing twenty arches, but others more correctly maintain that a drawbridge could not be reckoned as an arch, and that, therefore, it could only be described as possessing nineteen arches; and this is the view taken in a singular old poem by John Leland, entitled "Kykneion Asma," or the "Song of the Swan," a translation of which is given in the Chronicles of London Bridge, 1827. The passage we refer to is as follows:—

> The streaming river bears us on
> To London's mighty Babylon;
> And that vast bridge, which proudly soars,
> Where Thames through *nineteen arches* roars
> And many a lofty dome on high
> It raises towering to the sky.

The greatest defect of Old London Bridge was the immense obstruction to the water-way, caused by the piers and projecting sterlings. Some idea of this may be gained from the fact that, although the bridge was 926 ft. long at low tide, when the water did not cover the sterlings the "water-way" was reduced to 194 ft., and an inquiry into the dangers attending the navigation of the old bridge shortly before its destruction reveals the fact that, although the water at low tide was 10 ft. deep under the central arch, it was sometimes only 18 in. deep a few yards "below bridge." The fall of water at the ebb of the tide was often as much as 8 ft., and the "full flow" must have been equally great in the opposite direction, so that the river could only have been navigable for large barges within about an hour or so of high tide. The Thames watermen became very expert at what was called "shooting the bridge"—that is, taking a boat down the cataract without either upsetting it or going under water. The term, "shooting the bridge" has remained in common use, although it does not now convey the idea of danger, which it formerly did. Our view represents the bridge at "slack water." The existing ancient views of London Bridge are very numerous; those in the Crace collection have been carefully described in the *Builder* of April 12, 1879, page 390. The earliest is an illumination dated 1419. The most important alteration which London Bridge underwent were in 1759, when the great centre pier was removed and replaced by an arch, and the houses on the bridge were removed. Attached to the approaches of London Bridge were several buildings of considerable interest. At the London end stood the Church of St. Magnus, which was destroyed by the Great Fire in 1666, and was subsequently rebuilt by Wren, and on the opposite side of

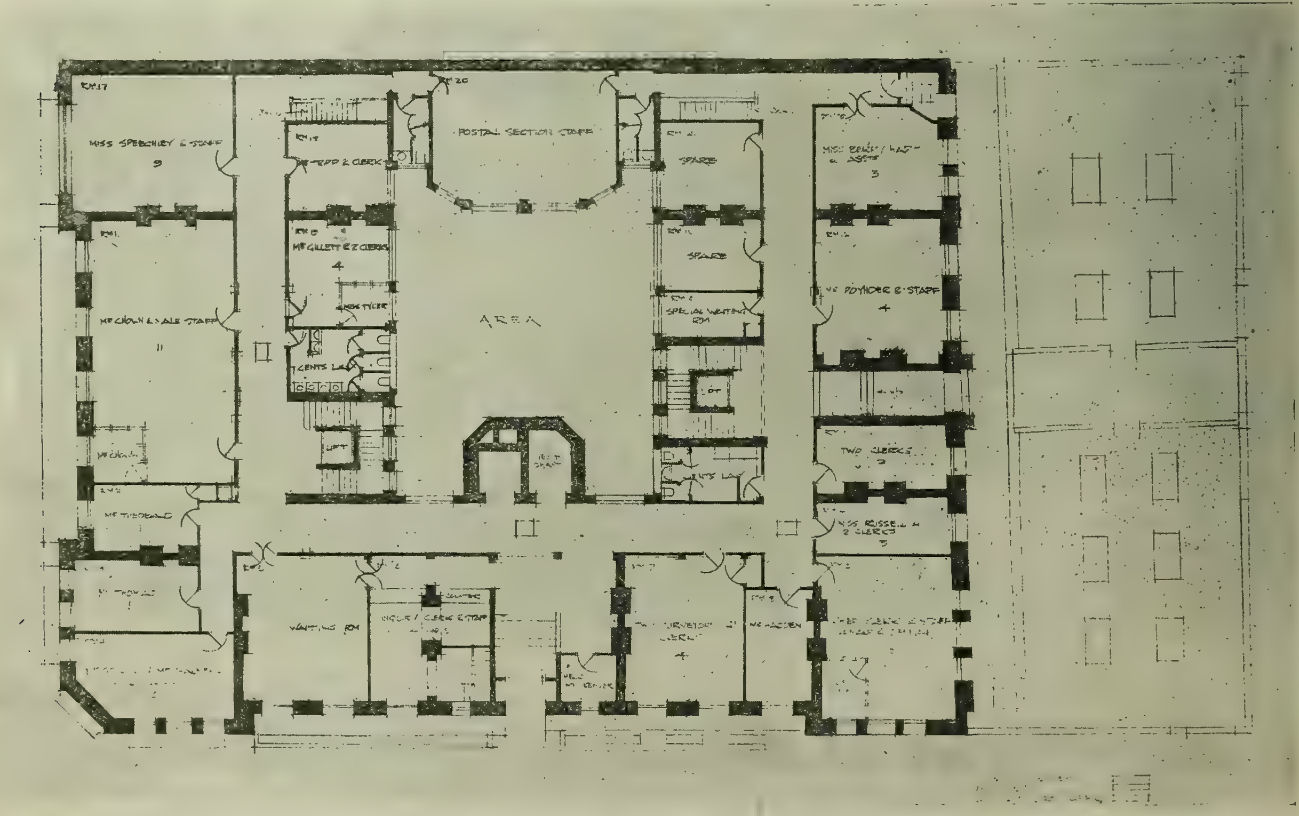


Phœnix Assurance Company's Offices.

The Late J. Macvicar Anderson and Mr. H. L. Anderson, Architects. (*See page* 13.)

the road were erected the first London waterworks; they seem to have possessed a lofty and picturesque tower, and to have dated from about the year 1588. At the Southwark end were the corn-mills, the Priory and Church of St. Mary Overy, and Winchester Palace.

We trust that the days of great architectural bridges are not yet past, and while the introduction and use of steel has rendered the



Offices of the Public Trustee. (*See page* 12.)

Portion of Parthenaic Frieze: Conjectural Restoration. (*See page* 14.)

By Mr. A. C. Conrade.

combinations possible more difficult to treat architecturally, the use of ferro-concrete in the closing decades of last century may give opportunities of once more reconciling architectural and engineering requirements where the use of masonry bridges is for some reason or other out of the question. But the old bridges of England and the Continent, and the wonderful structures of the Romans, remain to show us what effects of design are possible in bridge building, while the great war of a hundred years ago finds its most fitting commemoration in the magnificent lines and mass of Waterloo Bridge.

Sculptured Drum of Column from Temple of Artemis, Ephesus: Conjectural Restoration. (*See page* 14.)

By Mr. A. C. Conrade.

The Bridge House Trust, which has had so powerful an influence upon London's development, is one of its oldest institutions. It is to-day a great power, and meets some of the pressing necessities of London which, without its aid, would have had to be met from the rates at the expense of other services.

It originated in the rents of the houses on London Bridge, of which there are records as early as 1122, and when in 1176 Peter of Colechurch built Old London Bridge its revenues became considerable. King John decreed that the rents and profits should go towards the repairs and maintenance of the bridge. Henry III. seized the revenues, but the Corporation regained possession, and in 1281 tolls were instituted. About this time private benefactors began to leave legacies for the Bridge House Trust, and, later, its income was further increased by profits from fisheries and water supply. Some idea of the extent of the income can be derived from the record that in 1358 the number of shops on the bridge was 138, and the total rent £160 4s.—in those days a very considerable sum. From a later record, in 1777, a day's toll was from £9 to £10, and the annual toll about £1,500.

The funds were administered by the Warden, who became a most important personage, and, although at first there were serious deficiencies owing to the rapid decay of the bridge and its bad construction, there was soon a surplus sufficient to enable the Trust to lend money for public objects, which it did from early in the sixteenth century. In Elizabeth's reign a standing committee was appointed with a Bridge Master to preside, and this is the authority to-day. The Committee is elected by the Liveries at midsummer.

The Trust erected Westminster Bridge in 1749 and Blackfriars Bridge in 1760. Southwark Bridge followed, and since then the Tower Bridge has been built. London and Blackfriars Bridges have been widened, and the accumulated riches of the Trust are now to be devoted to the much discussed St. Paul's Bridge.

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EDINBURGH ARCHITECTURAL ASSOCIATION.

Owing to the fact that the majority of the members are now on military duty, the Associate Section of this Association have had to suspend their syllabus. The senior body, however, arranged their programme for the present session, and amongst other interesting items is included a lecture by Mr. W. T. Oldrieve, F.R.I.B.A., F.S.A.(Scot.), on "A Recent Visit to New Zealand and Some of the South Sea Islands." Several visits have been arranged for, and the annual excursion will be to Perth on Saturday, July 1.

REINFORCED CONCRETE REGULATIONS.

The regulations with respect to the construction of buildings wholly or partly of reinforced concrete and to the use and composition of reinforced concrete in their construction, which were made by the London County Council on July 6, and confirmed on July 13, have been allowed by the Local Government Board, and the Board directed that they should come into operation on January 1. The details of the regulations were published in the *London Gazette* on the 28th ult.

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MEETINGS.

MONDAY, JANUARY 10.

Surveyors' Institution.—Paper by Mr. R. M. Kearns (Fellow) entitled "Notes on Reinforced Concrete." 5 p.m.

Incorporated Clerks of Works' Association (at Carpenters' Hall, London-wall, E.C.).—Lecture by Mr. A. Fincham. 7.45 p.m.

TUESDAY, JANUARY 11.

Institution of Civil Engineers.—Ordinary meeting. 5.30 p.m.

THURSDAY, JANUARY 13.

Society of Architects (at 28, Bedford-square).—Annual general meeting. 5 p.m.

Royal Society of Arts.—Colonel Sir Thomas H. Holdich on "The Romance of Indian Surveys." 4.30 p.m.

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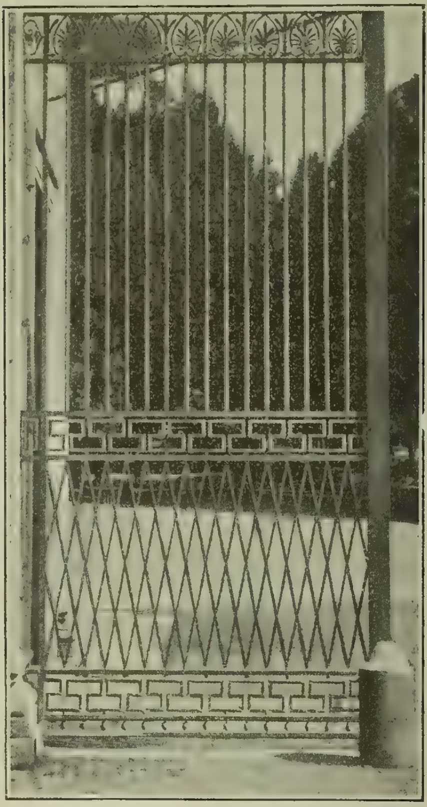
CORRESPONDENCE.

The Housing Problem.

SIR,—Will you permit me to open the new year by inaugurating a discussion in your columns on this important subject?

The normal growth of house building since the Finance Act, 1909, has been interfered with, and most people and all architects and quantity surveyors hope that the speculating builder has been killed without hope of resurrection, and this decay in growth has been emphasised most unwisely since the war. It will, however, have to be faced in the future, and perhaps the new era will be in the direction of erecting extensively garden cities. We should all like to see this enlarged upon. But does this movement really reach the class to be catered for? I suppose everybody agrees that after the war the interest on money will be permanently increased; also the cost of building (along with other commodities) will be raised, not only with wages, but owing to the demand for every class of building material to make good the wastage of war, as well as the decay in the natural growth of buildings since 1909, so that it will be difficult to build a "garden city house," with land, roads, gas, water, and drains, to let at 10s. a week. If a good workman is earning 40s. a week, he is no more justified in living in a house at 10s. a week than another man with £400 a year is in living in a house of £100 rental. But even if he will pay this rent, the man earning 40s. a week need not be looked after. He can save sufficient money to build his own dwelling with the help of his building society. But the casual labourer earning from *nil* to 20s. a week must be housed. It is a duty on citizenship. There are three courses open:—(1) He must pay higher rents to attract capital in preference to investing in War Loans. (2) The Corporation may build; but if Corporations build they should be restricted from letting houses at a rent insufficient to pay interest on the cost, for one must remember that Corporations can borrow money at 2 per cent. less than most private owners, and it is unfairly pauperising people for a Corporation to build houses worth 6s. rent and let them for 4s. They have just as much right to build houses worth £60 rent and let them for £40, and to take the difference from the rates, and legislation should enforce and limit such restrictions as interfering with private trade. Or (3) there must be a drastic alteration in building by-laws, and I think, Sir, that this is the most feasible principle. If you make a survey of the houses in any city or large town which have been built twenty-five or thirty years, these houses are out of date; not only that, but the district is out of date for the class of house. Yet in accordance with the building by-laws these houses are so well built that they will last for another 100 years or more, and it is impossible to ask the owner to scrap them. Still more impossible is it to show him that it is a profitable investment to scrap them and to build something else, as the rent has never been sufficient to pay both interest and a sinking fund. Yet in any other trade they would have been scrapped or remodelled long ago. Then, even if such solidity is necessary, fashions change. Why may I not build a house with rooms 6 ft. 6 in. high if I wish? If I can't let it, I am the loser. If I do let it, it is because someone else wants it.



Old Italian Ironwork: Gateway, Villa Umberta, Rome. (*See page* 11.)

No doubt there will be wastage during the war, but in every previous European War refugees have come to England; many have remained, and have partly made good the casualties and taught us new trades. Everyone wishes the wage-earner to be comfortably housed in a decent dry house (wherever practicable with a bath), but unless he will pay a much higher rent or induce the actual builder to continue the good lesson taught to the munition worker, of doubling his output, it resolves itself either into Corporations building all houses at the cost of the ratepayers, or reducing radically their building restrictions, and, to quote Mr. Nettlefold's seasonable words, "that local authorities should be content and wisely content to encourage others to build houses." W. H. WOOD.

Leeds.

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BOOK RECEIVED.

GOTHIC ARCHITECTURE. By T. G. Jackson. Two volumes. (Cambridge University Press. £2 12s. 6d. net.)

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FIFTY YEARS AGO.

Railway Matters.

THE new Farringdon Station of the Metropolitan Railway and the extension line to Finsbury have been opened for traffic. The time occupied in running between Finsbury and the Great Western Railway at Bishop's-road is twenty-two minutes, calling at all the intermediate stations. There are to be four lines of rails on the extension line, two for the Metropolitan line proper, over which the trains now run, and which will be continued to Trinity-square, and there, by a junction with the District Metropolitan line, form a portion of the "Inner Circle" line on the narrow gauge. The other two lines are on the mixed gauge for the accommodation of the Great Western, Great Northern, and Midland Companies' traffic; but the mixed gauge lines are not carried further at present than Aldersgate Station.

[*** We give the above extract from the *Builder* of January 6, 1866.—ED.]

Detail from Choragic Monument of Lysicrates.

Drawn by Mr. A. C. Conrade. (*See page* 14.)

FAMOUS CHURCHES OF RUSSIA:

BLAGOVIESHCHENSKI SOBOR IN THE KREML', MOSCOW.

MILLIONS annually flock to Paris, to Rome, and other famous cities of the Continent, but in the past not many have thought it worth their while to pay a visit to the historic towns of Russia. Truly Russia has been neglected. This state of things, however, will pass, and pass quickly. Russia and Britain, having joined hands in the titanic task of upholding the cause of a common humanity, are friends as never before. It is the first step. After this will follow conducted tours and enhanced facilities of communication. Russia will become the fashion and Petrograd popular. But of all the towns in Russia it is safe to say none will claim more interest than Moscow, the famous capital of mediæval Russia.

The almost complete isolation of Russia during the period extending from the fourteenth to the eighteenth century provides the cause of its development along such seemingly narrow yet characteristic lines. Throughout that period, so important in the evolution of modern Russian history, the town of Moscow was the very centre of its existence. She was "Our little Mother Moscow," and only by those who understand the Russian temperament and know how endearing and expressive the language may be made can the full force of such a title be appreciated. To her, as a child to its mother, the people turned in times of trouble and affliction, and at all times for guidance in spiritual things. She was the Mecca of their faith, the favoured dwelling-place of their rulers.

It is true that when St. Petersburg was founded, in the early years of the eighteenth century, Moscow lost her temporal pre-eminence. Peter the Great practically forced the whole fashionable world—the Court and nobility—to take up its abode in his new capital on the banks of the Neva. Moscow henceforth was left behind, and happily left behind, in that stern struggle for progress along Western lines which was inaugurated by the shipwright Tsar. But Moscow has never lost her place in the nation's affections, nor will she ever. Whatever happens, she will never cease to be Holy Moscow, the "Little Mother." She is the most Russian town in Russia, the centre of religious life to the most religious people in the world.

The recollection of her past historic *rôle* has something to do with this; but also there is the underlying feeling that she is representative, as is no other town, of all that is revered in Russian national life.

What Moscow has been to Russia the Kreml' has ever been to Moscow—the centre of its life and interest. For within its ancient walls is the Grand Palace of the Tsars and the Uspenski Sobor (the Cathedral of the Assumption), wherein the Tsars assume the Crown. Moreover, within this ancient citadel on every hand are buildings which recall the glories of its storied past. Most noteworthy perhaps of these are the "Spass na Borou" (Our Saviour in the Wood), the most ancient church in Moscow, and two other cathedrals besides the Uspenski. One of these, dedicated to the Archangel Michael, is the national Valhalla where are buried the Grand-Dukes and Tsars from the time of Ivan "Kalita" (Money-bags) (1341), to Féodor Alexievich (1682), with one exception. The other is the Cathedral of the Annunciation, whose history we are at present to consider.

Of the cathedrals, Blagovieshchenski Sobor is perhaps the most interesting from an architectural point of view. All three stand grouped around the great tower of Ivan Veliki on the Sobornaya Ploshchad—the Cathedral Place—close by the Grand Palace. But the Cathedral of the Annunciation, owing perhaps to the fact that it was nearest to the old palace, the remnants of which still exist incorporated in the fabric of the Terem, was the "Chapel Royal," so to speak. At its font the children of the Royal House were baptized. At the Holy Door before its altar the Tsars were wedded, and within its precincts approached the other sacraments of the Russian Orthodox Church. In fact this cathedral was for five centuries the scene of most semi-State ceremonies in which the Grand-Dukes and Tsars took part.

Although less favoured in some respects than the Uspenski or Archangelski Cathedrals, it is externally of more pleasing aspect and design. Being smaller than either, and less in altitude even than the grandiose modern palace behind it, it appears all the more picturesquely compact in consequence. Its general appearance as seen from the north-east may be gathered from the illustration. It will be observed that it is typically Russian in its general appearance, and is perhaps as good an example as any to be found of this distinctive type. Almost entirely neglected in our text-books and in our schools, there is yet a fund of instruction and interest to be gleaned from the study of this curious type—an admixture of Tatar and Byzantine art.

The remotest date to which we can go back in the history of Blagovieshchenski Sobor is 1291, when a wooden church was erected on this spot, the highest within the Kreml', by Andrew, son of Alexander Nevski, Prince of Novgorod. The foundation of a new church by Vasili Dmitrievich is recorded in 1393, while eleven years later (1404) we are told in the Annals "commenced the subscription for the Church of the Annunciation on the Grand-dukal Court." The walls of this early church were painted in fresco by Andrei Rublev, a Greek Theofan, and a monk Prokhor.

Ivan III., soon after throwing off the Tatar yoke (to which the Russians had been subject for two hundred and forty years and from which they were released in 1480), proposed to erect a new church. Hence, in the summer of 1482, as attested in the Annals, "began to be demolished the church on the Square of the Annunciation, the upper part being pulled down." Thus it would seem evident that the ground floor was left for a time. The annalist mentions particularly that this ground floor was left "for keeping the treasury"—that is all those precious objects and treasures belonging to the church, and also the Sovereign's personal property. The popular name of the "Church of the Tsarian Treasure," by which it was sometimes designated, arose from this custom of storing beneath the churches valuable objects. In those days Russians of wealth were well advised in thus consigning their valuables to the protecting care of the Church. They were for the most part lawless times, and men thought little enough of theft from their neighbour. But theft from the Church was quite another matter. Larceny may have been prevalent, but even the thief would not commit the sin of sacrilege in Russia.

It is noticeable that most references (in guide-books and the like) to the demolishing of this early church speak as if it was a stone church which had been pulled down. By inference they seem to suggest that the original ground floor still remains. But it is altogether more probable that it was of wood, for the annalist goes on to speak of the foundation of a stone church of the Annunciation in the spring of 1484 and of its consecration in 1489. This is substantially the church that yet stands. Architects and craftsmen were procured from the neighbouring principality of Pskov to undertake the work as being more skilful in stonework than the Muscovites.

In the year 1547 it was seriously damaged in the great conflagration which destroyed nearly the whole of Moscow. We are told that such was the intensity of the flames that liquid metal ran along the streets. In all about 1,700 adult "souls" lost their lives. In the Church of the Annunciation, as in many another church, many precious icons were destroyed and the whole edifice threatened.

Ivan IV. (the Terrible) repaired the damage, securing for the purpose the Milanese architect, Aloisio da Carezano, who was then at work in Moscow. He reconstructed the gallery and, in addition, built the four chapels above, adorning the interior of the church with painted icons from Novgorod, Pskov, and other places. He is said, too, to have covered the cupolas with plates of gold, the metal for the purpose having also come from Novgorod. From which it may be gathered that this Tsar, Ivan "Grosnagho," although he fully deserved the name, yet had spasmodic interludes of piety, and was thoroughly Russian in his devotion to the Orthodox Church. There are indeed few churches dating from before his time in Moscow that do not owe some embellishment or renovation to him.

By these additions the outward appearance of the cathedral was much improved, not only by the new chapels with their four additional cupolas, but also by the Renaissance arcading of the gallery. The latter had hitherto been either an open passage-way or perhaps covered in with a superstructure of wood.

Throughout the sixteenth century the Annunciation continued to be the Court church, and it was so until the time of the first Tsar of the Romanov dynasty (Mikhail Féodorovich, 1613–1645). It was this monarch who bestowed upon it the full title of "The Cathedral Church of the Annunciation of the Most Holy Virgin." It was he, too, who had an approach constructed uniting the church with the Royal apartments of the old palace. This improvement, by means of which the Royal Family could pass directly and unobserved from the palace to the choir of the church, was probably included in the restoration which followed the sack of the church by the Poles in 1610.

The Poles occupied the town and put the inhabitants to the sword. It was a time of anarchy following upon the death of Boris Godunov—it was the break between the dynasty of the Ruriks and the Romanovs. The restoration of peace followed, and the election of Tsar Mikhail, to a great extent owing to the efforts of a butcher of Nizhni-Novgorod. He made an eloquent appeal to the people and moved them to something like concerted action. Under the leadership of Prince Pozharski they besieged the town, which eventually fell to them in 1612.

Just two hundred years later the cathedral again suffered considerably. The French invasion of 1812 spared none of the edifices in the Kreml', and the rest of the town was burned by the Russians themselves. The Royal Palace was reduced to ruins, and horses were stabled in the cathedrals. In the words of an officer in the French Army who was there present, "Moscou en grande partie n'offrait plus à nos yeux qu'un amas de ruines."

The cathedral was restored by Nicholas I., and in the reign of the succeeding Tsar, Alexander Nikolaevich, the nine cupolas were re-covered with gilded bronze plates.

In surveying its architectural features we must bear in mind that the long basilican form, so familiar to us in the West, is seldom if ever adopted in Russian churches. In their plan they deviate but little from the square, and are generally small. Blagovieshchenski Sobor is no exception to this rule. It is indeed bijou, and in plan is only slightly oblong.

Its ogive roofing, the novel appearance of which is noticeable in the illustration of the north façade, is typically Muscovite. In the drawing the peculiar setting of the central ridge of the lower range of gables will be noticed. This feature, which also occurs on the south side, is necessitated by the structural features of the interior. The peculiarity would not, of course, be observable from the ground.

But the dominant exterior characteristic of Russian ecclesiastical architecture is undoubtedly the pear-shaped cupola. In some instances the bulbous dome issues from a tapering roof or spire, but is then less pleasing than when, as in the present case, the dome is superimposed upon an elegant slender drum rising from low-pitched vaulting. In this case there are nine cupolas; mostly, if more than one there are five. But the mere number is immaterial, the important point being that they should accentuate the importance of the great central dome.

Introduced into Russian architecture by the Tatars and ever since adhered to by the Russians, this form of dome is purely Asiatic. It is the one trait which, strangely enough, raises the native church architecture from being merely a phase of debased Byzantinism into something noble and distinguished.

Each cupola is surmounted by an imposing openwork cross, supported by chains which depend from each arm to the bulb. At the foot of each cross there is a crescent. This combination is of frequent occurrence on Russian churches, and by some writers it has been said to be a relic of the Tatar occupation. The Tatars, they say, changed the churches into mosques and placed the Moslem crescent above them, and when Ivan Vasilievich drove them out he restored the crosses, but left the crescents to symbolise the triumph of the Cross over the Crescent. This may be considered rather as a clever fiction than as the fact. The most satisfactory and most probable explanation is that it is allegorical of the Saviour (Lord of Earth) issuing from the Blessed Virgin (Queen of Heaven). Such a symbol, expressing as it does vital and familiar principles of the Orthodox faith, would appeal most strongly to the minds of the faithful.

The great cross on the central dome is of gold, and by good fortune escaped destruction by the French in 1812. It was known that one of the edifices in the Kreml' was surmounted by a cross of gold, and the looters, seeing the great gilded cross on the tower of Ivan Veliki near by, thought that must be it. They pulled it down, doing much damage to the top of the tower, but were disgusted to find when they examined the cross that it was only gilded wood. Meanwhile, if they had but known it, the real gold cross was just across the square—where it is to-day in fact—on the central dome of Blagovieshchenski Sobor.

The exterior work of the five ancient drums, and of the apsidal termination—the arcaded cornice with slender pilasters resting on corbels—strongly resembles much of the early work upon the churches of Vladimir, Suzdal, Novgorod, and other districts. Already in the twelfth century it was an established feature of Russian architecture; and even that early it had developed considerable ornateness of detail, as witness the quaintly decorated "fringe" round the diminutive Dmitrievski Sobor at Vladimir.

The chief apartment, the church proper, is raised above the street level 5½ *arsheen* (12 ft. 10 in.). It is approached by a fine covered gallery which flanks the church on three sides. Below is the crypt, a series of vaults extending beneath the galleries and the nave, but yet on the street level, and appearing on the south façade as a deep ornamental socle or plinth to the whole superstructure. This device of raising the floor of the church and surrounding it with a gallery is one which is frequently found in Russian churches, and is appropriate to the climatic conditions of the long Russian winter. It secures the edifice with its costly decorations and precious contents from destruction by damp and cold. On the other hand, in the heat of summer the surrounding gallery gives a welcome coolness to the interior nave. The vaults are reached by steps from the south-west corner of the gallery.

Access to the gallery is gained at the north-east porch by a flight of broad steps from the Sobornaya Ploshchad. Exteriorly it appears as an arcade of semicircular arches resting on ornamental pilasters, the whole giving unmistakable evidence of the influence of the Western Renaissance. This tendency is noticeable in all of the work of the period of Ivan "Grosnagho," although here and there one finds the more barbaric tone of Tatar influences.

The interior walls of the gallery and the whole of the low-arched cross-vaulting are covered with frescoes and elegant mural decoration. These paintings have undergone so many restorations that it is unlikely that much of the original work is left. Their exact age, therefore, is problematic. They are attributed by one well-known guide-book to the year 1508. This, of course, is out of the question, as the present gallery was not built until after the fire of 1547. Another writer states that they were painted in the year of the great plague, 1771. What is most likely is that at its completion the gallery was decorated, at least in part, and the pictures subsequently restored or replaced at the dictates of the Imperial taste. For instance, in 1621, Tsar Mikhail Féodorovich "commanded to be painted the arches and walls uncovered at the side-wing of the church" (somewhere towards and near the north-eastern stairway). Again, by order of Tsar Alexis Mikhailovich, the porch and stairs were painted (probably restored) by the icon-painter, Ivan Filatev.

Seen in the diffused light they have no doubt a strong devotional effect upon the deeply religious Russian mind. But quite apart from this they are of much interest to all students of the Byzantine tradition. The subjects are mostly of sacred import, but there is a most interesting series of portraits of ancient philosophers and historians, which are said to have been originally executed in the sixteenth century by the Russian artist, Féodor Edikeeff. Socrates, Plato, Menander, Anacharsis, Zeno, Ptolemy, Plutarch, Thucidides, and others are represented, each supporting a cartouche upon which is inscribed an extract from their works. On the eastern wall of the gallery, over the entrance, is a great painting of the Saviour, popularly supposed to have a supernatural origin. "Not made by human hands" is the way the faithful put it. One cannot help wondering how in such a case they ever allowed one Simon Ushakov to restore it in 1661. He may have been a celebrated icon-painter in his day, but it seems bordering on the disrespectful.

Two doors lead from the gallery into the nave of the church, one on the north side and one on the west. The southern wing of the gallery is now, and has been for many years, partitioned off. At one time access was possible by the stairway at the south-eastern porch, which forms so striking a feature when the church is viewed from beyond the railings which enclose the Sobornaya Ploshchad. This entrance, now disused, is traditionally mentioned as having been built by Ivan for his own convenience in going to church. It would certainly prove a short cut to the niche which he usually occupied during the services and which is still shown, by the south-western pier, opposite the Royal door of the Iconostas. The Tsar's throne now stands in front of this niche. Again, this south-eastern entrance is mentioned as being the spot from whence were published the banns of this Tsar's fourth marriage. This marriage was against the Canon law of the Greek Church, but he forced the prelates to confirm it and also to endorse without protest his frequent divorces—his fifth, sixth, and seventh marriages.

This portion of the gallery was subsequently set apart as a convenient place for the Tsars to rest after the services, and the porch became the usual place for the disbursement of the Imperial charity. The eastern portion is now occupied by the chapel of St. Nicholas, founded by Nikolai I. about the year 1835.

The portals of the doors leading into the church are worthy of more than passing notice. They are without a doubt one of its most interesting decorative features. The two are almost identical in their elegant Renaissance scroll-work carved in relief. Their delicacy of execution establishes their sculptor in the front rank of artists in stonework. They have been said to be native work, but they are usually, and I think correctly, attributed to the Milanese Aloisio. This artist was one of many craftsmen and master-builders whom the Grand-Duke Ivan III. invited to Moscow at the end of the fifteenth century. He did much good work in Moscow at that date, and was occupied in rebuilding the wing of the old palace behind the cathedral from 1499 until 1508. Some of the doorways still existing in the Terem Palace are also attributed to him. They show a similar delicacy of feeling, and are no doubt attributable to the same hand. They date, of course, from the early years of the sixteenth century.

It is impossible in mere black and white to give an adequate idea of their workmanship. But in the accompanying detail drawing one may at least get a hint of their design. Imagine a ground of cerulean blue, with rich relief heavily laid with gold and set with precious stones, surrounding massive red-copper doors, decorated with figured panels, and surrounded by frescoed walls. Truly the Russian loves to adorn the House of God.

The interior is no less worthy of study. In the midst of the church are set the four square piers which support upon a lofty four-arched vault the great drum of the central cupola. The vaulting is thus divided into nine bays. From the four corner bays are raised on similar elegant drums the four cupolas of next importance. The two more easterly ones, beyond the Iconostas, are visible from below, but the westerly pair are screened from view by intermediate vaulting.

The whole of the interior, including the pillars and the vaulting (which is invariably unrelieved by ribs), is decorated with mural paintings of varying merit. These frescoes comprise representations of Christ and His Saints, the Visions of the Apocalypse, the Supplication of the Damned, and the Glorification and Reward of the Saved. Their actual age is doubtful. Fabricius, in his work "Le Kremlin," 1883, states that they were first painted in 1482. This is clearly a mistake, as the present building was not started until 1484, and was not finished until 1489. That they may be fairly ancient is shown by the fact that they are mentioned in early inventories of the church. Moreover, early in the sixteenth century (in 1508), by order of the Grand-Duke Vasili Ivanovich, it was decorated in fresco—at any rate in part—by the monk Theodocie Deonicev. It may be that he only restored others, for the Annals at this time record: "Ordered . . . (the church) . . . to be signed by gold," and "commanded also . . . the upper part of the church to be covered and gilded." We must bear in mind, too, the great fire which in 1547 devastated the church and without a doubt necessitated the renovation of the whole interior. Subsequent restorations were carried out by Peter the Great in 1697, and by Catherine II. in 1770; there is a tablet on the south-eastern pillar to this effect. Again it was restored in 1835 by Nickolai I.

One may surmise that some of these "restorations" were entirely new work, for in 1882, while occupied in renovating the paintings then occupying the walls, the architect Schokhin and the painter Fartussov discovered that there were more ancient paintings beneath. They reported their discovery to the Emperor, and a Committee was formed to supervise their preservation. This Committee was composed of an archæologist, Zabel, an architect, Rozanov, and a painter, Botkin. The more recent paintings were removed and those beneath once more restored. With such a record one may reasonably doubt if any vestige of the original work is now extant. Like the celebrated stockings of Sir John Cutler, immortalised by Martinus Scriblerus, they have been so often mended that we cannot distinguish any part of the original materials.

As is the case in the parent Greek Church, so with its Russian offshoot, orientation is strictly observed.

The altar is placed in the centre of the triple apse, and in front of it is the elaborate Iconostas which crosses the nave at the easterly pair of piers. Entirely dominating the interior by its wealth of decoration and its display of sacred pictures, the Iconostas is still fine. But anciently the bands and columns of bronze which divide it into five tiers of icons were encrusted with gold and silver and enamel work. It was necessary to restore it entirely after the pillage of 1812.

In the centre is the Royal door of massive silver, and to the right of it is a fine example of Byzantine art, a painting of the Saviour, which is said to date from 1337. Another picture on this side worthy of special note is of the Annunciation. It is of Greek origin and is surrounded by a rich and costly frame. On every Iconostas the Saviour is depicted on the right next to the Holy Door and next to that is always placed the "titular picture," as it might be called, of the patronage of the church in question.

But the most celebrated of all the icons in Blagovieshchenski Sobor is undoubtedly the Virgin, which is on the left of the door. This is the Donskoi Virgin, the "Virgin of the Don," and is a much revered icon of fourteenth-century date, in a frame of pure gold. The frame still shows signs of the damage caused by French hammers. In their search for all that was worth taking they mistook this frame for mere copper-gilt, and so left it. That it was thus passed over is, of course, popularly attributed to miraculous agency. But this is only a later addition to its fame. It obtains its name from the Grand-Duke Dmitri Donskoi, who carried it affixed to his standard at the battle of Kulikovsko, in 1380. Here is what the Chronicles of Novgorod tell us of this battle:—

"And having heard this, that a great Tatar force was coming against him, the Veliki Knyaz Dmitri Ivanovich gathered many soldiers and went against the godless Tatar, trusting in the mercy of God and in His Immaculate Mother, the Mother of God, the eternal Virgin Mary, calling to his aid the honourable Cross. For he entered their country beyond the Don and there was there a clean [*i.e.*, treeless] field, at the mouth of the River Nepryadva, and there the pagan Ishmælites had ranged themselves against the Christians."

They were at first fearful and inclined to run away, but they were rallied.

"And the Veliki Knyaz Dmitri with his brother Volodmir ranged their troops against the pagan Polovets people, and raising their eyes humbly to Heaven, and sighing from the depths of their hearts, said, in the words of the Psalm: 'Brothers, God is our Refuge and our Strength,' and both forces immediately met and there was a fierce battle for a long time, and God terrified the sons of Hagar with an invisible might, and they turned their shoulders to wounds [*i.e.*, fled] and they were routed by the Christians. And some were struck down with weapons and others were drowned in the river, a countless number of them."

And all this happened on September 8, 1380, "a Saturday, the day of the birth of the Mother of God."

Again the picture was taken into the battle line in 1591 by Boris Godunov, whose victory over the Tatar Kazi-Hirey-Khan was attributed to its agency.

It has ever been the custom with the Russian Army to take with them into the field of battle their beloved icons. As recently as 1904 General Kuropatkin, before starting for Manchuria, received from the hands of the Abbot of the St. Sergius monastery a holy icon. Moreover, at the outbreak of the world-war in 1914 each regiment of their modern scientifically-equipped army marched to the front with its holy banner at its head.

The Donskoi Virgin is more attractive in its treatment than most icons of the Virgin, a fact probably attributable to its Græco-Italian origin. The Mother and the Divine Infant, usually so stiffly and formally treated, are here almost human in attitude, cheek to cheek. Another picture, the Assumption of the Virgin, is depicted on the back.

Most of the other pictures on the Iconostas are modern, including the eighteen medallion heads of saints by eighteenth-century Flemish artists which surround the Donskoi icon.

Another fine old icon is within the sanctuary. It is a Virgin and Child of somewhat more formal treatment than the "Don," and is known by the name of Barlovskoi, or "The Most Holy Womb." Originally of fourteenth-century date, it was restored by Simon Ushakov, probably in 1661, when he restored the great painting of the Saviour in the gallery.

The floor of the cathedral, a present to Tsar Alexis from the Shah of Persia, is a fine example of mosaic work in jasper and agate. It is said to resemble a portion of the pavement in St. Mark's, Venice.

On the level of the nave it only remains to speak of the sacristy. Near to the cathedral, at the south-east corner, there existed until the seventeenth century a small chapel of St. Vasili the Emperor, founded in 1489. It was found to be too near to the south apse, and in 1654 it was closed and demolished. The sacristy now occupies the site. The Iconostas of the old chapel was preserved and now adorns the modern chapel of St. George above.

Over the west end of the nave is the choir, a gallery which in times past was usually occupied by the Tsarina and Tsarevna during mass and the other services. The Tsar himself always sat below in front of the Iconostas, facing the Holy Door. The throne of State is still in its place, and near it is an alcove in which, as before mentioned, Ivan "Grosnagho" usually attended the services. I say the Tsar sat below, but the Russian always prays standing, hence there are no seats in the churches in Russia.

The staircase to the choir and thence to the four chapels (which are quite separate from the church and from each other) is at the north-west angle of the nave. From the choir a door (again in Renaissance style, though not so elaborate as those below) leads out upon the roof of the gallery and thence descending by a few steps connects by a short bridge with the Palace.

By way of the roof, to the right and left, the two westerly chapels are gained. Beyond each of these, by the archways between the wall of the church and the chapels, those at the north-east and south-east are reached. This arrangement, by which the four isolated chapels are accessible only by doorways from the roof of the gallery, must strike the western mind as being curious in the extreme. One encounters many such curiosities in Russian architecture, a truly glaring instance being the monstrosity, rather than church, of Vasili Blagennoi on the Krassnaya Ploshchad. This is really a collection of separate little churches or chapels connected by passages and united under one roof.

Architecturally there is little calling for remark in the chapels. Their exterior appearance is quiet, although rather commonplace. Their severe panelling and other detail is purely Renaissance, although at the same time it is not so obtrusively evident as to make the crowning of each chapel by its ogive gables and pear-shaped cupola anomalous. The four drums are more plain than those of the older part of the church. There is no pilastered cornice such as stamps the older work with its Vladimir-Suzdal feeling.

Interiorly the roof of each chapel is composed of four vaults. The two greater rest upon the north and south walls, while the smaller pair spring east and west, joining them and forming in the centre a four-arched vault upon which is raised the drum and cupola.

The north-west chapel is known as "The Church of the Most Holy Virgin." It has what is perhaps the most ancient Iconostas in Moscow. Upon this are icons of the Annunciation and the Four Evangelists, the Lord God of Hosts, and the Last Supper. These venerable pictures are richly decorated with silver repoussé and precious gems. At the north-east is the "Church of the Archangel Gabriel," the Iconostas, furniture, etc., of which date from the time of Tsar Mikhail Féodorovich (1613–1645), and were a gift from him. The chapel at the south-west corner commemorates the "Entry of Christ into Jerusalem," sometimes called "The Jerusalem Gate." The Iconostas here again was a gift from Tsar Mikhail, and dates from 1614. The remaining chapel, which is dedicated to St. George, was rebuilt during the reign of Alexander Pavlovich. This monarch also changed its name, dedicating it to the sainted national hero, Alexander Nevski, but it is now again known by its more ancient name. The only outstanding feature is its fine old Iconostas. This, as has been mentioned earlier, was removed from the chapel of St. Vasili at its demolition in 1654.

The chapels, by some strange chance, entirely escaped the depredations of Napoleon's army in 1812. Perhaps they could not discover the way to reach them. Hence the fine gold and silver work and the precious stones which deck the Iconostases and the other church furniture of value were left untouched.

The precious treasures and relics of the sacristy were removed at that eventful time to Vologda, and so escaped likewise. Among the more remarkable of these may be mentioned (1) a reliquary containing the sponge used at the Crucifixion; (2) two copies of the Gospels presented by Ivan Vasilievich, one in 1568, the other in 1571 (both are adorned with silver, gold, and many precious stones); (3) a chalice of agate given to the church in 1328 by the Archpriest Moise; (4) two portions of the True Cross cased in gold, one adorned with pearls and various precious stones, the other enamelled; (5) the Panagia (a cross worn suspended round the neck by bishops) of Theofan, patriarch of Jerusalem (this relic is formed of stone from the sepulchre of Christ); (6) an image (cruciform) enclosing another relic of our Lord's Passion, decorated with figures in black enamel. (This precious object—a spike from the Crown of Thorns—was brought from Tsargrad (Constantinople) to Suzdal in 1383 by the Archpriest Deonicev, and thence at a later date to Moscow.)

This is but a brief review of this interesting little cathedral. In some way or another all Russian churches are of interest, for no two are alike. But over some more than over others there spreads that national tone, that spirit which is part of the Russian individuality. Situated as she is between Western civilisation on the one hand and Oriental barbarism on the other, Russia has absorbed something of the spirit of each. Hence, although she received her earliest inspirations towards ecclesiastical architecture from Byzantine sources, yet the Asiatic influence of the Tatars has left its mark. If we add to this the strong uplift which in the late fifteenth century was given to Russian architecture by the Milanese craftsmen of the Court of Ivan III., we have as a product the unfamiliar but expressive type so well exampled in Blagovieshchenski Sobor.

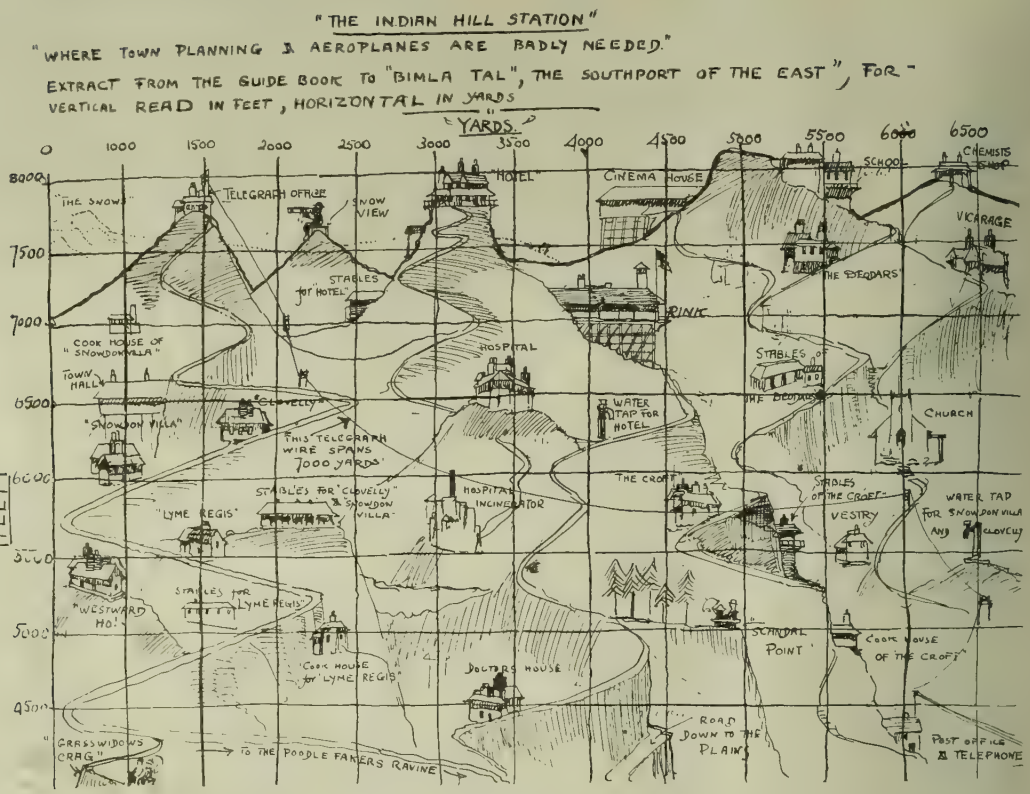
CYRIL G. E. BUNT.

BOOK REVIEW.

Experimental Physics. By HAROLD A. WILSON M.A., D.Sc., F.R.S. (Cambridge University Press. 8½ in. by 5½ in. 405 pp.)

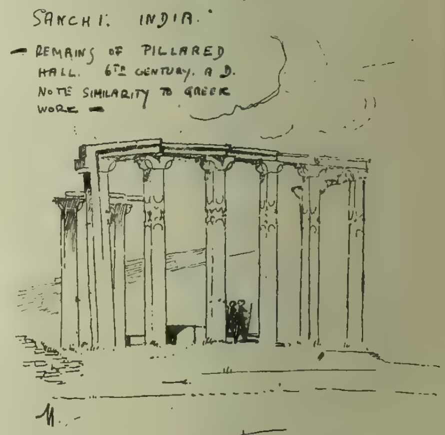
THE author's aim as set out in his Preface is to deal thoroughly with fundamental physical phenomena without attempting to be exhaustive in the field which he includes in his survey, and though, as he states, much originality is not possible in the treatment of the branches he selects—mechanics, heat, sound, and light—his work shows an individuality which justifies yet another text-book on these subjects.

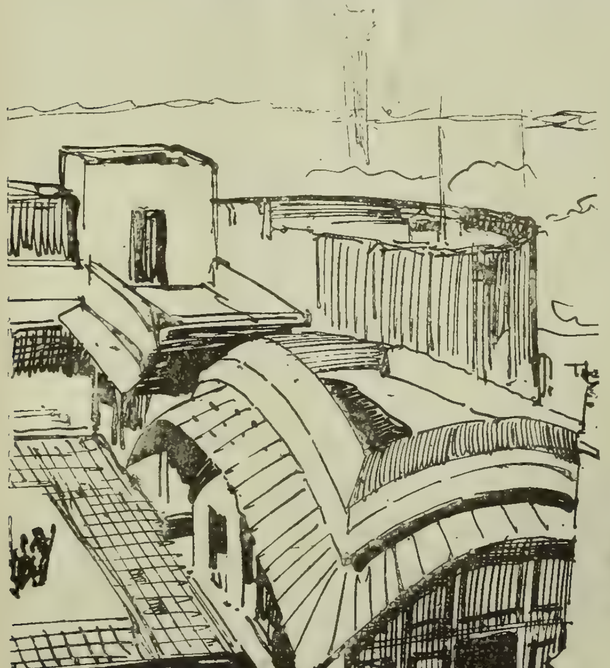
Though we are told that no previous knowledge of physics is assumed, we imagine that some mental sympathy with natural science is expected by those who use this book, and a general knowledge of elementary algebra and trigonometry is assumed by the author for its study. The first hundred odd pages are devoted to mechanics, in which section the experimental method for investigating the force acting on a body moving in a circle may be cited as an example of clear exposition and good diagrammatic illustration. Rather less space is devoted to heat and also to sound, in which latter section the chapters on wave motion and wave trains are worthy of comment, and are more advanced than much of the other matter. The last hundred pages deal with light. The book seems well suited for students beginning a college course or for schoolboys with good mathematical attainments who desire to obtain a useful acquaintance with physics. Published as one of the Cambridge Physical Series, the work is well printed and the illustrations are particularly clear and practical.



SKETCHES BY THE LATE GORDON SANDERSON.

THE accompanying series of sketches form a selection from a number collected at various times during Eastern voyages, and, although only hasty impressions collected here and there, preserve memories of pleasant places visited and serve as "*technica memoria.*" One shows the late Mr. Sanderson's impression of an Indian hill station, fitly described by a well-known architect as a place "where God made the hills and the monkeys built the houses." The details from Sanchi, India, illustrate the Grecian character of the ornament found on the early Buddhist structures; while the artist attempted, in another, to reconstruct a portion of a walled Buddhist city from the carvings found on the Sanchi gateways. The illustration of the "Golden Temple," Amritsar, illustrates the jumble of styles so often found in Eastern cities where matters of architectural moment are left to the tender mercies of the local civilian, with the result that Gothic clock towers take their place side by side with the best Oriental structures.


SANCHI. INDIA.
— REMAINS OF PILLARED HALL. 6TH CENTURY. A.D. NOTE SIMILARITY TO GREEK WORK —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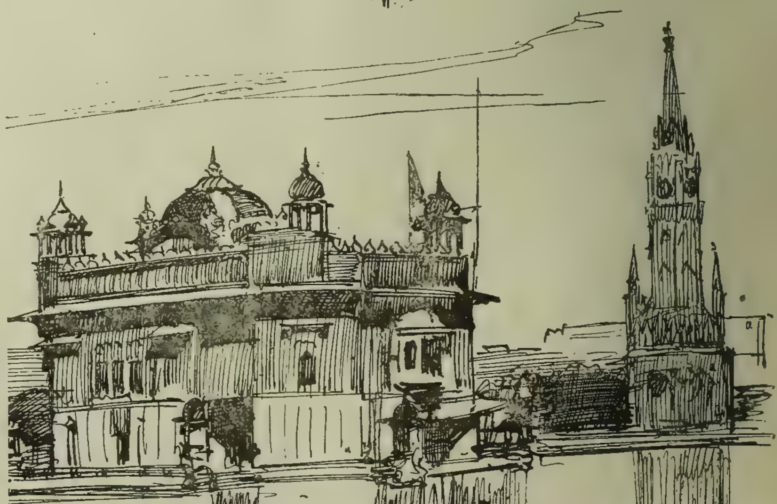
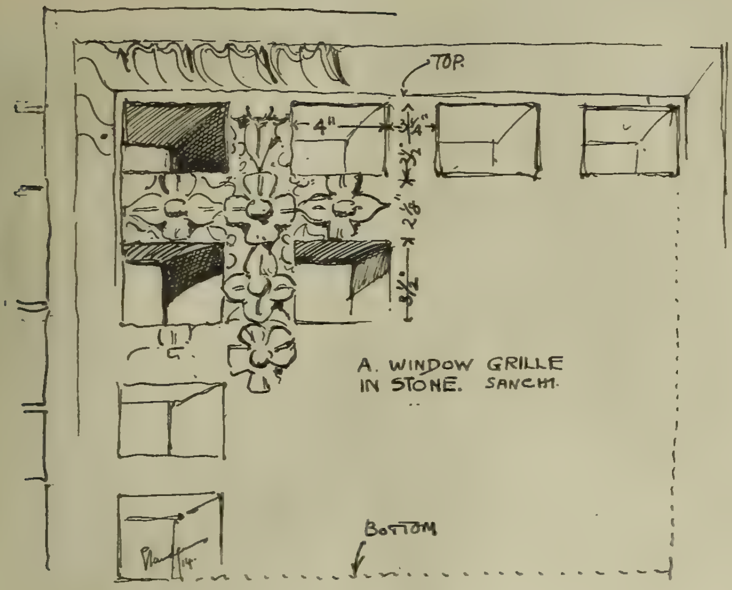
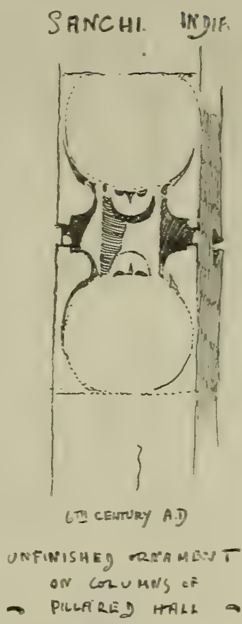
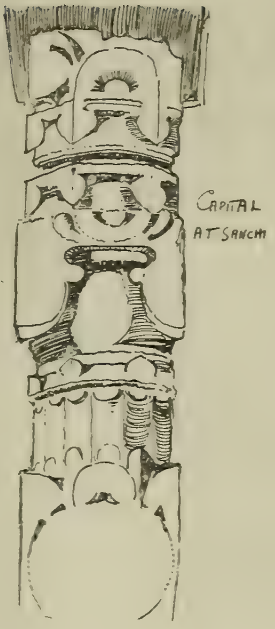


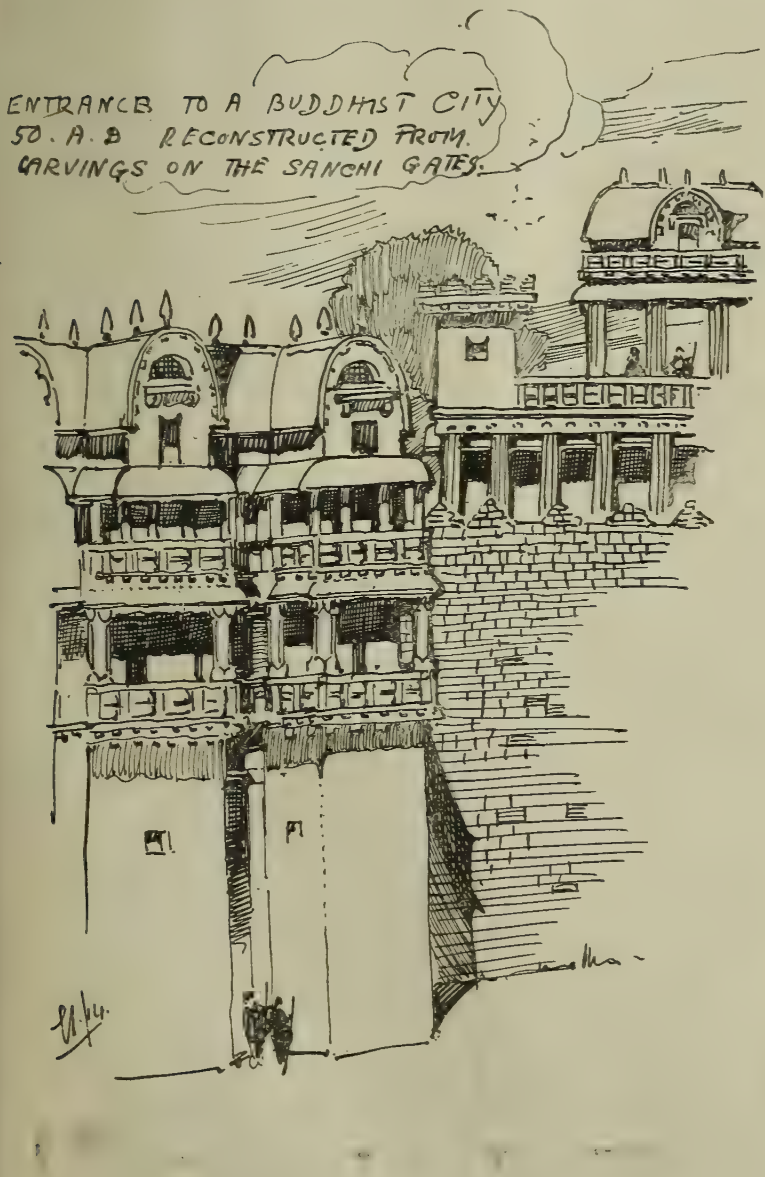
The "Golden Temple," Amritsar, India.

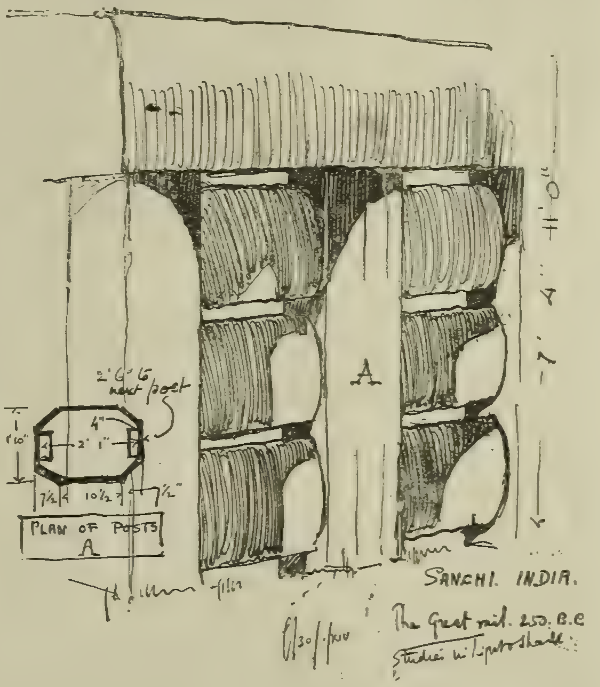
Sketches by the late Gordon Sanderson.

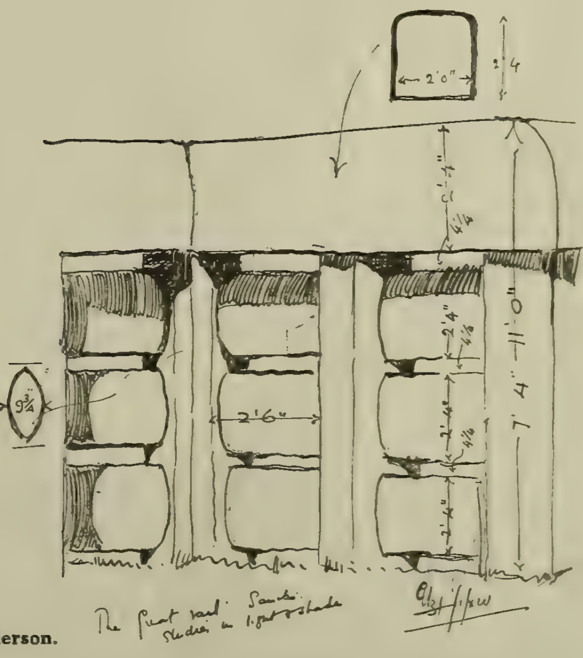







ENTRANCE TO A BUDDHIST CITY
50. A. D RECONSTRUCTED FROM
CARVINGS ON THE SANCHI GATES.





Sketches by the late Gordon Sanderson.

LEGAL SECTION.

NOTES ON CURRENT CASES.

Myers *v.* Bradford Corporation: Public Authorities Protection Act.

BY sect. 264 of the Public Health Act, 1875, it was enacted that:—"A writ or process shall not be sued out against or served on any local authority, or any member thereof, or any officer of a local authority, or person acting in his aid, for anything done or intended to be done or omitted to be done under the provisions of this Act, until the expiration of one month after notice in writing has been served on such local authority, member, officer, or person, clearly stating the cause of action, and the name and place of abode of the intended plaintiff, and of his attorney or agent in the cause; and on the trial of any such action the plaintiff shall not be permitted to go into evidence of any cause of action which is not stated in the notice so served; and unless such notice is proved the jury shall find for the defendant. Every such action shall be commenced within six months next after the accruing of the cause of action, and not afterwards, and shall be tried in the county or place where the cause of action occurred, and not elsewhere."

The above section was repealed by the Public Authorities Protection Act, 1893, and notices of action, so far as public authorities are concerned, were done away except in such cases as such notice may be required by special or private Acts of Parliament. By sect. 1 of this Act the time limit for bringing actions against public authorities and persons acting in pursuance of a public duty was altered from "six months next after the accruing of the cause of action" into "where any action, prosecution, or other proceeding is commenced in the United Kingdom against any person for any act done in pursuance or execution or intended execution of any Act of Parliament, or of any public duty or authority, or in respect of any alleged neglect or default in the execution of any such act, duty, or authority . . . the action, prosecution, or proceeding shall not lie or be instituted unless it is commenced within six months next after the act, neglect, or default complained of, or, in case of a continuance of injury or damage, within six months next after the ceasing thereof."

A series of decisions has established the position that, although the text of the Act only refers to a "person," yet this word includes "public authorities" (which words are only found in the title of the Act) in so far as they are acting in pursuance of a public duty or authority or in the execution of any Act of Parliament.

In the recent case of Myers *v.* the Bradford Corporation the House of Lords has upheld the decision of the Court of Appeal that the protection of the Act does not extend to private contracts into which a public authority enters, although such contracts may be undertaken under powers conferred upon the authority by an Act of Parliament.

The facts were that under a private Act of Parliament the Bradford Corporation were empowered to make gas and sell coke. They sold some coke to a private person, and in delivering it their carter tipped part of it through a shop window instead of down the coal-hole. In an action in the County Court for damages caused by the negligence of the authority through their carter the jury found for the plaintiff, but the County Court judge entered judgment for the defendants on the ground that the action was not commenced within six months of the act complained of, holding that the defendants were protected by sect. 1 (*a*) of the Public Authorities Protection Act, 1893.

On appeal to the Divisional Court Mr. Justice Lush held that where a public authority acting within their statutory powers had undertaken obligations towards a particular individual, and in the course of discharging them they or their servants were negligent, it was not a case in which they were acting directly in pursuance or in execution of any Act of Parliament or of any public duty or authority, and consequently the defendants were not protected by the Act.

Mr. Justice Bray, on the other hand, held that the plaintiff's action was founded on tort, and was maintainable without alleging any contract; that the delivery of the coke sold was done in execution of the defendants' public duty or authority, and that the defendants were protected by the statute.

There being no conclusion arrived at by the Divisional Court, the judgment of the County Court judge held good, and an appeal was made to the Court of Appeal, which held that there was no obligation created by statute under which the Bradford Corporation were bound to supply coke to the plaintiff, but when they did so they entered into a voluntary private contract, and not in the execution of any public duty or authority. Lord Justice Swinfen-Eady distinguished this from the case of a public authority which works a tramway where it is their duty to admit any person as a passenger who presents himself and pays his fare, and behaves himself properly. Strictly speaking, he said, there was no contract between the public authority and the passenger, because there was no volition on the part of the authority to make a contract with the intending passenger. The fact was they were bound to make the contract with the passenger if he chooses to make it with them, so that it is really not a case of contract which only occurred in law when the parties to it made it of their free choice. There is no case in which it was freely at the option of the public authority seeking the protection of the Act either to make or to refuse to make a particular contract to which it has been held that the Act applies.

It is a matter of some importance to builders and contractors who have dealings with public authorities to have the matter definitely settled that when they have entered into contracts with a local authority for specific purposes the authority cannot bar a claim upon them which is based upon contract because an action has not been brought within six months. This was settled in the case of the Midland Railway Company against the Withington Local Board ([1883] 11 Q. B. D. 788), which was an action to recover back money paid to the defendants in respect of works of sewering, etc., in an alleged private street. The action was held to come within the scope of sect. 264 of the Public Health Act, 1875, and was brought too late, but the Master of the Rolls said that if the action had been brought for something done or omitted to be done under an express contract the section would not apply.

But in cases where there is no express contract between the plaintiff and the local authority the authority can claim the protection of the Act if an action is not brought within six months of the occurrence.

It is not always easy, however, to determine when the "act, neglect, or default complained of" has happened, and everything depends upon the time from which the six months is to be reckoned.

In the case of Backhouse *v.* Bononi ([1861] 9 House of Lords Cases 503) A. was the owner of certain houses standing on land which was surrounded by the lands of B., C., and D. E. was the owner of mines running underneath the lands of all these persons. He worked the mines in such a manner (without actual negligence) that the lands of B., C., and D. sank in; and after more than six years' interval their sinking occasioned an injury to the house of A. A. brought an action against E., and the defence raised was that the action was barred after six years from the working in the mine which caused the sinkage; but the Court held that the right of a person to the support of the land immediately around his house is not in the nature of an easement, but is the ordinary right of enjoyment of property, and till that is interfered with he has no legal ground of complaint, although, in fact, something may have been done which (without his knowledge) has occasioned results that will afterwards affect his property, and therefore the action could be brought at any time within six years after the enjoyment of the house was interfered with by the actual occurrence of the mischief.

In the case of the Darley Main Colliery Company against Mitchell ([1886] 11 Appeal Cases 127) similar circumstances were under consideration. The lessees of coal under Mitchell's land worked the coal so as to cause a subsidence of the land and injury to houses thereon in the year 1868, and compensation was made for the injury then caused. No further workings were made, but in 1882 a second subsidence took place, again causing injury, but it was found that there would have been no such later subsidence if the lessees had left enough support under the respondent Mitchell's land. The House of Lords decided that the cause of action in respect of the further subsidence did not arise till that subsidence occurred, and that the respondent could maintain an action for the injury thereby caused, although more than six years had passed since the last working by the lessees.

The two examples cited have no reference to public authorities, but the case of Crumbie *v.* Wallsend Local Board ([1891] 1 Q. B.) was an action under somewhat similar circumstances in which a public authority was concerned. The facts were that the local board made an excavation under a street for the purpose of laying a sewer. The excavation was not properly filled in, and in consequence subsidence of the plaintiff's land with injury to houses thereon took place, which began at a period more than six months before and went on continuously down to the commencement of an action by the plaintiff in respect of the damage caused by the subsidence. The defendants urged that no fresh cause of action had accrued within six months before the date of the writ, and that the continued damage during that period did not constitute a fresh cause of action, but the Court of Appeal held, following the decision in Darley Main Colliery Company *v.* Mitchell, that an action could not be brought for the excavation (which took place more than six months before), but that a cause of action arose when damage to the plaintiff's property resulted therefrom by subsidence, and that each fresh subsidence which did not exist the day before gave a fresh cause of action. Lord Justice Fry said the sole question was whether the cause of action accrued within six months before action brought as required by sect. 264 of the Public Health Act, 1875, and he concurred in the view that each fresh subsidence created a cause of action within the meaning of the section.

The case of a continuing injury was considered in Hague *v.* Doncaster Rural District Council ([1909] 100 L. T. 121). The plaintiff was the occupier of farm lands, and he sued the defendants for damages for the death of certain cattle owing to the pollution of a stream flowing through his land by an effluent discharged into the stream from sewage works belonging to the defendants. The claim specified the death of three animals in November, 1906; July, 1907; and September, 1907; but the action was not commenced until April 22, 1908, and the defendants relied upon the Public Authorities Protection Act, 1893. In the County Court the judge held that the Act afforded no protection to the defendants, and gave judgment for the plaintiff for damages. This decision was upheld by the Divisional Court on appeal, and Mr. Justice Bigham, as he then was, said the action was brought in respect of an act done by the defendants in pursuance of a public duty, and, when one asks what the act was in respect of which this action was brought, the act is and must be the pollution of the stream. That is the act which the defendants did in pursuance or execution of their duty. They did not kill the cows in the execution of any duty at all. He did not know when the pollution began, but it began before the death of any one of the three cows, and it continued down to the moment when the action was commenced. He was of opinion that the act complained of was a continuing act, and there was a continuing injury by means of which the defendant suffered damage. He therefore came to the conclusion that the action was instituted in the case of a continuance of an injury or damage within the meaning of the Public Authorities Protection Act, and, having been brought before the matter complained of had ceased, the limitation placed upon sect. 1 of the Act, which would have applied in other cases, does not apply since the action was brought in time.

A similar decision was given in the case of Harrington *v.* Derby Corporation ([1905] 1 Ch. 205) and from dicta of Mr. Justice Buckley, as he then was, it might be gathered that he regarded the decisions in the cases of Backhouse *v.* Bononi and Darley Main Colliery Company *v.* Mitchell as applicable to cases in which public authorities as distinguished from private persons or private trading corporations are concerned; but there is apparently no decision directly bearing upon the point, and it may be gathered from the judgment of Mr. Justice Bigham and the decision in Crumbie *v.* Wallsend Local Board, quoted above, that except in the case of a continuing injury the date from which the six months are to be reckoned is the date of the "act, neglect, or default complained of," and not the time when the damage results from the act, etc., and it is very doubtful whether, if an act is committed by a public authority more than six months before the damage shows itself, any action at law can be successfully maintained against them.

LAW REPORT.

Workmen's Compensation Act: Award against Builder.

AT Clerkenwell County Court on December 22, before his Honour Judge Howland Roberts, a claim under the Workmen's Compensation Act was made against Mr. William Green, builder, of Cressida-road, Holloway, by Maud Cane, a widow, of Anatola-road, Dartmouth Park-hill, N., in respect of loss of her husband.

Mr. Giveen was counsel for the applicant, and Mr. Tindal Atkinson appeared for the respondent.

Evidence was given to the effect that applicant's husband, James Cane, while employed by Mr. Green, and engaged on work at a house in Miranda-road, received fatal injuries through some brickwork falling upon him.

Judge Roberts observed that he had to decide whether the accident arose out of, as well as in the course of, deceased's employment as a builder's labourer. Mr. Green had a job of underpinning a wall at the house in question, and deceased, who had only been in his employ for five days, was told to clean up the bricks, and in his spare time to go and help the plasterer inside the building. In the absence of respondent, deceased was seen knocking away at the brickwork of the wall where the underpinning was going on. A little time afterwards there was a fall of brickwork. Deceased was discovered with bricks lying upon him, and he died shortly afterwards from the injuries sustained. Was there any evidence to satisfy him (the Judge) that at the time of the accident the deceased man was doing work within the sphere of his employment? The evidence in regard to that was conflicting. Witnesses called on behalf of the applicant said it was a common practice for builders' labourers to do this class of work, and on small jobs especially. One witness, with eighteen to twenty years' experience in the building trade, said it was usual for labourers to do the cutting away of brickwork under the direction of the bricklayer, and in cross-examination he said it would be a proper part of a builder's labourer's work to cut away footings. On the other hand, the respondent, in his evidence, said that in his practice he never allowed any labourer to do that. He said: "A labourer never touches brickwork when in my employ. I do all the cutting away." Mr. Green might have his own particular rules, but unless he (the Judge) could come to the conclusion that some special orders were given to the workman when engaged, he did not think that would be sufficient to say that the ordinary sphere of a builder's labourer was limited in this case. There was no evidence as to any special orders being given at the time the deceased was engaged. Orders were undoubtedly given to the man by his employer when the latter went away from the job at three o'clock; but that was an entirely different question. That seemed to raise the question as to in what manner work was to be done rather than what work was to be done by deceased. If nothing was said to a workman at the time of his engagement, limiting the actual work he was engaged to do, was there anything to show that the man was not engaged in the ordinary way to do that which a builder's labourer would ordinarily do? His Honour did not think there was. Deceased was employed as an ordinary builder's labourer, and no instructions were given him one way or the other. On the day of the accident instructions were given him to do certain work. The man did what was in disobedience of his employer's orders, but did that limit the sphere of his employment? His Honour thought the answer to that must be "No." Although the man left work which he was specially told to do, that was disobedience which did not limit the sphere of his employment as a builder's labourer. The conclusion he (the Judge) must come to was that the accident arose not only in the course of the man's employment but also out of his employment. The widow was therefore entitled to compensation, and he entered judgment in her favour for £210 12s. and allowed costs on Scale B.

CLIMATE AND ARCHITECTURE.

ARCHITECTURE is affected by many influences, amongst others may be mentioned race, climate, materials, religion, and social conditions. Of all these influences climatic conditions have had the most obvious direct effects. It is not proposed to consider how, indirectly, architecture has been affected through the influence of climate on the personality of the architect. Different people hold different views on this matter. We may quote the late F. W. Moody as being interesting: "A southern climate seems to affect and elevate the imagination as much by its genial influence on the organisation of man as by the beauty of the scenes it presents. . . . I fear we must conclude that those who are, as it were, habitually saturated with the larger and more ideal aspects of nature, and whose life and faculties expand under their influence, must, in the long run, be superior to those who dwell in a less genial climate." Considering more direct influences, we may note that climate is the principal factor that determines the type of roof and window of any building. The former is the more important, for the history of architecture is very largely the history of roofing. With regard to fenestration, Mr. Walter Cave says:—"It was not till the time of the Roman Empire that the admission of light came to be considered as an integral part of the design."

A climate such as that of Egypt, which is very hot with a slight rainfall, results in the use of a flat roof, the simplest method of protecting a building from heat; the exclusion of wet being of secondary importance, a sloping roof becomes unnecessary. To obtain light only small openings are used, it being natural in a hot and very sunny climate to prefer a dim light, as a relief from the outside glare. In sunny lands artists seem to use bright colours naturally, and details are refined. We see all these results in the ancient architecture of Egypt, even down to the vividly-painted ornaments and delicate reliefs. One important point to be remembered in designing buildings for Europeans in the tropics is that the white man needs protecting from light rays, which are very harmful to the nervous system, as well as from heat. "The pigmentation in the skin of a coloured man cuts off light rays, and he has therefore only to shield himself from heat rays to be perfectly comfortable." The flat roof is still generally employed, and is very convenient for dwelling-houses, as it affords pleasant sleeping spaces during hot weather.

Greece has brilliant sunshine and less heat, but more wet, to contend with than Egypt; the consequence is that the slightly sloping roof, by means of which rain-water is conveyed from the building, becomes a necessity. The slope adopted for the roof settled the proportion of the pediments. The natural method of excluding wet from a building with a pitched roof is to make the roof plane advance beyond the external face of the wall, thus covering the joint between the roof and wall; as a result we obtain the cornice, which may be said to spring out of an absolute constructive necessity. The Greek temple was beautified by the addition of the peristyle, which is of great value as a protection from sun and rain, and which keeps the building behind cool. The sculptures are also protected from the weather. The main frieze in the Parthenon is under the peristyle, while the frieze of the external Order and the sculpture in the pediment had great projecting cornices over them. The details and ornament, owing to the abundance of bright sunshine—and to the marble employed—are extremely delicate and refined, and colour decoration was freely used.

In Italy climatic conditions are very similar to those of Greece, so that it is evident that the modifications made by the Romans in developing their architecture, partly on Greek lines, were not due to differences of climate.

Romanesque churches were built in the South of France with a ribbed barrel vault over the nave, supported by a half-barrel vault over each aisle. Such an arrangement allows of no clerestory and becomes less suitable, owing to lack of light, the further north we go.

In northern countries, where we have more rain and occasional snow to encounter, steeper roofs are advisable, with ordinary building materials, than those used in Greek and Roman buildings. Windows are larger and details to be satisfactory must be bolder.

The use of groined vaulting, instead of a continuous barrel (as had been discovered in Rome), allowed light to be obtained in the upper part of a building, and in Romanesque architecture, particularly in the northern parts of France and in England, groined vaulting was developed for this purpose.

The use of the round arch in groined vaulting led to many difficulties, and ugly stilted arches had sometimes to be used. The application of the pointed arch did away with all these difficulties; by its use ample light was provided, and this method of construction became the normal one in the north of France and in England.

When the Renaissance in architecture spread to England and France it did not at first entirely upset traditional methods of building; thus "we find in the Early Renaissance chateaux of France the steep roof and the great chimney-stack, and in England Inigo Jones's Coleshill retains these features."

BUSINESS PREMISES, REGENT-STREET, W.

Building operations are in progress in Regent-street at the corner of Little Argyll-street, W. The general elevation will conform to the design of the premises at Oxford-circus, already carried out by Mr. Henry Tanner, F.R.I.B.A. Part of the new structure will be a branch of the Union of London and Smiths Bank, Ltd., the architects for which are Messrs. Dunn, Watson, & Curtis Green, Lincoln's Inn-fields, W.C. The remainder will be occupied by Messrs. Dickens & Jones, Ltd., for whom Messrs. Stephens & Munt, Hans-road, Knightsbridge, are acting. The general contractor is Mr. James Carmichael, Trinity-road, Wandsworth, S.W.

BUILDING MATERIAL AND EQUIPMENT, NEW ZEALAND.

H.M. Trade Commissioner in New Zealand has forwarded extracts from the local Press, from which the following particulars are taken:—The ratepayers of Auckland have authorised the municipal authorities to raise a loan of £115,000 for the purpose of carrying out the following works:—Erection and equipment of market buildings, £55,000; establishment of a fish market, £20,000; water supply in Grey Lynn, £10,000; construction of drainage works at Remura, £30,000.

THE BUILDING TRADE.

THE REBUILDING OF BELGIUM.—I.

WE have received the following statement of the nature of the proposals for the rebuilding of Belgium, how they will be financed and their proposed scope, from an eminent Belgian architect now in this country, and it may be regarded as practically official :—

"The Belgian refugees in England and France had scarcely settled themselves into their temporary homes before, with that propensity of co-operation which is so characteristic of the nation, they began to arrange meetings for the interchange of their ideas on the reconstruction of Belgium.

In a very short time this movement was widely extended in every direction, and became of such importance that the Belgian authorities themselves were drawn into it. On February 11, 1915, an International Congress was held in London solely to discuss the question of the reconstruction of Belgium.

The Belgian Minister of Public Works presided, and among those taking part were the directors of the English Garden Cities and Town Planning Association (who had organised the Congress), delegates from Holland, Russia, and Poland, and different members of the Commission Royale des Monuments de Belgique.

His Majesty the King of the Belgians honoured the Congress with his most marked support, and telegrams of congratulation were exchanged between the King and those present at the Congress.

Other associations have been created at the same time on similar lines both in England and France, and even in the country now under enemy occupation. Some of these societies are provincial, and their aim is to collect information regarding those who have suffered through the war, to watch over their interests, and to arrange for the complete restoration of all kinds of damaged property. They will also, directly if it is possible, work at the improvement of the economic situation in the province. Each of these Provincial Committees has already formed Sub-Committees for the Arrondissements.

In short, there exists a complete and well-organised scheme which is steadily enlarging its scope, and the Belgian who is throwing all his heart into this work for the regeneration of his country has the feeling, perhaps illusory, but none the less comforting, that during this time of preparation he is thus drawn closer to his native land.

Faced by this great rush of eager workers, and of minds fertile in new ideas, it became necessary to plan out their course, and the Belgian Government, in the person of the Minister Helleputte, architect and engineer, passed a law whose different clauses defined the exact limits within which this movement of reconstruction might work.

This law, dated August 25, 1915, prepares for the new conditions of reconstruction for towns and monuments, and even for private property. It reads as follows :—

Article 1. "Vu l'article 26 de la Constitution, qui confère l'exercice du pouvoir législatif au Roi, à la Chambre des Représentants et au Sénat ;

Vu l'impossibilité de réunir les Chambres législatives ;

Sur la proposition de notre Ministre de l'Agriculture et des Travaux Publics.

Nous avons arrêté et arrêtons :

Article 1er. Les communes sur le territoire desquelles des constructions publiques ou privées ont été détruites par suite des faits de guerre, sont tenues d'établir des plans généraux d'aménagement destinés à servir de base aux autorisations de construire ou de reconstruire, à délivrer le collége échevinal.

Le Ministre de l'Agriculture et des Travaux Publics peut, à la demande des administrations communales intéressées, dispenser celles-ci de cette obligation, soit pour une partie, soit pour l'ensemble de leur territoire." *

This clause shows that the Belgian Government wish the towns to be rebuilt in accordance with modern æsthetic and hygienic ideas. The Government will leave the work of preparing plans for the towns to be rebuilt in the hands of the municipalities and with the former owners of the ground, which is divided into very small lots.

At the same time the clause provides (only in the case of some unimportant communes, no doubt) that the municipal authorities may be left free to deal with financial questions, so that they are not compelled to obey the laws laid down for towns whose resources would permit them to carry out the most elaborate schemes.

Article 2. "Ces plans doivent être approuvés par le Roi. Lorsque l'importance des projets le comportera, le Ministre de l'Agriculture et des Travaux Publics soumettra les plans, pour avis, à une commission spéciale composée de :

1. Les membres correspondants de la Commission Royale des Monuments et des Sites résidant dans la partie non envahie de la province.

2. Les membres effectifs de la Commission Royale des Monuments et des Sites résidant dans la partie non envahie du pays.

3. Un membre de l'administration communale intéressée.

Cette commission sera présidée par le Gouverneur de la province ou, à son défaut, par un député permanent.

A partir du moment où la capitale, sera libérée, la Commission spéciale sera composée des membres effectifs de la Commission Royale des Monuments et des Sites, résidant dans la partie non envahie du pays et d'un membre de l'administration communale intéressée.

Elle sera présidée par le président de la Commission Royale des Monuments et des Sites." †

This clause states that the "Commission Royale des Monuments et des Sites," formed entirely of artists, engineers and architects of well-established reputation, will be the final judges of the completed plans for the large towns. In other words that these plans will be carefully and skilfully examined, and that the Belgian towns after the war will look beautiful and artistic, while at the same time they will be hygienic and practical.

The six other clauses deal with the approval of the new buildings by the communal and provincial authorities, with the expropriation which it will be necessary for the State or the communes to make, and with the penalties which will be inflicted for violations of the law.

It is clear, therefore, from our examination of this law that from now onward Belgium is ready for the moment when it will be possible to start on the work of restoring her ruins. The Belgian Government has also made arrangements for the temporary housing of refugees on their return to their country, and could at once send into the country all the materials necessary for the erection of temporary shelters as soon as their territory is evacuated.

Two questions present themselves on the mind directly the restoration of the towns is spoken of.

Where will Belgium find the necessary money, and where, having the money, will she obtain building materials ? For the money it will be necessary to resort to private enterprise, foreign but allied ; principally, of course, England will provide it. And for building materials also we must look to England. But these questions, which are of the greatest importance, must be discussed in another article.

CHAS. PETEIN,
Architect (Brussels)."

SOME POINTS ABOUT PUBLIC WORKS CONTRACTING IN BELGIUM.

By LEON LOOTENS, Contractor of Public Works in Ostend, President of the Provincial Federation of Contractors in West Flanders ; and HENRI VOLCKERICK, Advocate, Counsellor of the Antwerp Chambre Syndicale of Contractors.

1. Concerning contractor's right to a lien upon the works until paid.
2. Concerning the special privileges enjoyed by suppliers of goods to contractors for works for the Belgian Government.
3. Concerning building owner's right to cancel contract in certain circumstances.
4. Concerning the determination of a contract in event of the death of the contractor.

SOME time ago the Builders' Merchants' Alliance, Ltd., published in London a pamphlet denouncing the dishonest practices perpetrated by land-jobbers and speculative building owners against contractors and their suppliers, and pointing out the want of a legal protection against such unfair devices. The author, Mr. W. H. Dowler, of Liverpool, characterises such a situation as "a crying trade scandal." It is a severe but justified criticism.

The reading of the above pamphlet has given the writers the idea of setting forth to British traders the means provided by Belgian Law for dealing with certain incorrect and somewhat similar operations in use in Belgium. This short exposition may help to prepare that reform of the law which the British Building Trade desires so urgently as the means of abolishing the intolerable grievance analysed by Mr. Dowler.

The knowledge of the exceptionally favourable situation created by the special protection conferred by Belgian Law upon contractors, and collaterally upon their suppliers, may facilitate commercial relations between British manufacturers of plant and materials and Belgian contractors, and facilitate the granting of the credit which will be asked for and may safely be extended to Belgian buyers after the war, when business and trade are resumed.

So this account of Belgian Law and of its mechanism will serve the double purpose of being useful to the traders of two countries united by so many common interests and by a daily increasing reciprocal esteem.

The most beautiful buildings have defects. So it is in the case of laws. It will be useful, therefore, after having stated the advantages, to point out the inconveniences of Belgian Law, and to indicate the methods of avoiding the latter by means of the contractor's privileged

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* In pursuance of Article 26 of the Constitution, which gives legislative power to the King, the Chamber of Representatives, and the Senate ; and in view of the impossibility of calling the legislative Chambers together it is decreed as follows :—

Article 1. The communes of that part of the country where public and private buildings have been destroyed by war are expected to draw up schemes of reconstruction to be deposited with the municipal authorities. The Minister of Agriculture and Public Works can, at the request of the interested districts, relieve them from this obligation in whole or in part.

† Article 2. Schemes must be approved by the King. If the importance of the proposals makes it necessary, the Minister of Agriculture and Public Works will submit the plans to a Special Commission composed of—

1. The corresponding members of the Royal Commission of Monuments and Sites who live in the undevastated parts of the country.

2. The working members of the Royal Commission of Monuments and Sites who live in the undevastated parts of the country.

3. A member of the interested communal authority.

This Commission will be presided over by the Governor of the Province or, in his absence, by a permanent Deputy.

When the capital is evacuated by the enemy the Special Commission will be composed of the working members of the Royal Commission of Monuments and Sites who live in undevastated parts of the country and a member of the communal authority interested, and it will be presided over by the President of the Royal Commission of Monuments and Sites.

rights and by the attentive prudence of a wise trader.

1. Concerning Contractor's Right to a Lien upon the Works until Paid.

In order to favour the development of building, the Belgian Law has created a particular right, which confers a great advantage on contractors of works both from their personal point of view and that of their creditors, and consequently improves their credit if used.

This law, while providing for the general case of the owner carrying out work on his property (land, buildings, or works), places at the contractor's disposal a means of securing against the owner and his creditors the debt arising out of the execution of the work. It has been inspired by the following considerations:—

1. The contractor who improves land or who puts up, reconstructs, or repairs any building or work, adds to the value of the real estate the value created by the works, viz., the materials, the supplies, and the wages of workmen and employees spent thereon.

2. The contractor receives payment of the price either by instalments, according to the progress of the works, or at their completion, or even at a less or more distant date after their completion.

3. The contractor is always money out of pocket until the final settlement of the accounts of the undertaking, seeing that he must pay with the punctuality and the regularity of a merchant the wages of his workmen and employees and the invoices of his suppliers.

4. The owner's financial position may be altered either during the works or before the payment of the price of the undertaking or of its remainder.

5. Unknown to the contractor the owner may sell or charge with privileges or mortgages the property on which the works are executed.

6. The speculator of bad faith may grow rich at the expense of the contractor.

7. Under the scheme of taxation buildings bring more into the public treasury and, therefore, it is to the public interest that building should be encouraged.

These various considerations have caused the establishment of a special lien or privilege in favour of the contractor.

This privilege has a distinctive characteristic. While other privileges are acquired without any formality by virtue of the law, and take their rise at the same time as the debt to which they apply, the privilege of the contractor is only acquired by the observation of certain formalities, in default of which various combinations of credit and security may cause the privilege to disappear.

Those simple formalities are of a double kind; they precede and follow the works; they are:—

(*a*) *Before beginning the works*:—(1) To obtain the appointment of an expert to estimate the value of the property in the then condition of the land, works, or buildings (this appointment is made on a petition laid before the President of the tribunal of first instance of the district in which the works are to be carried out), and (2) to inscribe the report of the expert on the record of the conservator of mortgages of the same district, and, the case occurring, to call the attention of the privileged creditors or mortgagees already similarly inscribed against the property to the said valuation.

(*b*) *After completing the works*:—(1) To obtain the appointment of an expert to estimate the value of the property in its new condition (this appointment is made in the same manner as the previous one), and (2) to record similarly the second report.

If the acceptance of the work does not occasion any difficulty between the owner and the contractor, the latter ought to proceed to the second valuation and its recording within a fortnight of the acceptance. On the contrary, if the acceptance gives rise to differences, the contractor ought to proceed within six months of the completion of the works to have them accepted by the expert entrusted with the second valuation, and to the recording of the report of acceptance and valuation within a fortnight of its date.

Practically but one petition fulfilling the double object required by the law is laid before the magistrate, who appoints an expert charged with the double valuation, and, also, the case occurring, with the acceptance of the works; but this expert draws up two separate reports at the above indicated times.

To whom belongs the initiative of those simple and quick proceedings? Three cases may occur:—

(*a*) Contractor and owner, when signing the building contract, agree to constitute the lien or privilege; then the petition will be drawn up in the names of both interested parties.

(*b*) The owner, regardful of the contractor's interest, of his own accord concedes the lien or privilege to the contractor; in this case, the law gives expressly the initiative to the owner.

(*c*) The owner objects to grant the lien or privilege; in such a case the contractor has a right of acting alone. If the terms of the law do not expressly provide for the contractor's initiative, they do not exclude it; they mention the intervention of the President of the tribunal in virtue of his office; but the action of a magistrate in virtue of his office may be urged by anyone interested in the matter, and more especially by the contractor for whose benefit this action is necessary.

By the observation of those formalities the contractor becomes a privileged creditor, and secures on the selling price of the property a preferential right to the amount of the surplus value of the property disclosed by the difference between the two valuations as resulting from the works carried out on the property.

The contractor's lien or privilege ranks from the day the first official report has been inscribed on the record of the conservator of mortgages; in other words, preferred rights which may originate against the owner between the date of recording of the two official valuations cannot prejudice the claim of the contractor, so far as the difference between the valuations is concerned.

In Belgium, immovable property or real estate is submitted to a system of legal publicity, organised by means of official registers kept by a functionary of the Government, who is called the Conservator of Mortgages. He who does not appear on those registers as an owner of an immovable property, or as a titulary of an immovable right, or as a titulary of either a privileged or mortgaged right, or as a tenant of an immovable property for a long term, may not exercise any rights against the property to the prejudice of third parties.

The registers of mortgages are public and may be referred to by everyone interested in the matter.

The lien or privilege established by Belgian Law will be better understood from a few examples of cases in which a contractor may find himself, either because too confiding, too negligent, too ignorant, or too afraid of prejudicing himself with clients to exercise his right of privilege.

1. A contractor, without taking proper precautions against the owner, accepts, carries out, and delivers a work and remains creditor, in whole or in part, for the price. If the event proves that the contractor had shown mistaken confidence in granting credit to the owner, he possesses the rights of an ordinary creditor, and has to share in the whole property of the owner when all the claims enjoying preferred rights have been paid out of the proceeds of the sale of that part of property upon which the preferred rights are secured.

2. A similar situation arises even when the contractor learns of his client's financial disability prior to entire completion of the work, as it is then too late to have recourse to the double valuation and recording referred to.

3. A contractor, without making use of this easy means of securing his lien or privilege, is engaged in the works, when the owner's condition is modified and gives rise to grave apprehensions as to the payment of the price. In this hypothesis, if the remnant of the works to be finished is relatively important, and if the contractor finds it to his advantage to complete the works, he may still have recourse to those special proceedings in order to secure the residue of his claim. By so doing the contractor does not cause an injury to anyone, for he takes the situation such as it exists at that time, and he submits to its consequences by the loss of his lien for a part of his claim. He exercises only that part of his right not already lost by his previous inaction; he is not bound to leave to the owner and his creditors a gratuitous advantage by completing the works.

In both above cases the contractor against whom no justified causes of complaint may be made enjoys against the owner, and collaterally against his creditors, several means of action—for instance, he may interrupt or suspend the work; he may refuse to deliver the finished work; he may demand from the Court the dissolution of the agreement. Such measures have nothing to do with the lien or privilege. It is unnecessary in this study to enlarge upon them; it is sufficient to indicate them.

How different and strong throughout is the position of the contractor who takes the authorised precautions, and proceeds to the double valuation and the double record in of his lien. Such a one thereby acquires a new, particular, and additional right to be preferred to the other creditors of the owner, and to be paid in priority of them out of the proceeds of the property's sale within the limits of the difference between the two valuations, provided the selling price of the property reaches at least the aforesaid difference.

Some figures and some cases of application will make the mechanism of the contractor's lien or privilege more striking.

The work is agreed for, say, 100,000 francs. The first valuation gives to the property on which the contractor is about to work a value of 50,000 francs; the second valuation made after the completion of the works assigns to the property in its new condition a value of 130,000 francs. These two valuations show that the works carried out by the contractor have added to the property a surplus value of 80,000 francs. By virtue of Belgian Law the contractor's claim is privileged to the amount of this surplus value.

If the property realises, on a sale to liquidate the owner's indebtedness, 130,000 francs, the contractor, creditor for the whole contract price and the only privileged creditor, will receive in preference and priority 80,000 francs; he will remain an ordinary creditor for the residue of his claim and share in the distribution of the remainder of the debtor's estate along with the other ordinary creditors in proportion to the amount of all the claims.

If the first valuation has been recorded before beginning the works, and if the owner, who at that time had no other engagements, contracts afterwards and before the recording of the second valuation a series of preferred and mortgaged debts on the property in question, the contractor has not, in principle, to fear those new privileged and mortgaged debts, because they rank only after his claim, unless his claim exceeds the amount of the surplus value ascertained by the double valuation. Thus, for instance, if the owner has charged the aforesaid property with new privileged and mortgaged debts to an amount of 60,000 francs, the contractor will receive in preference and priority 80,000 francs out of the selling price of the property; the remainder, that is 50,000 francs, will go to the other privileged creditors and mortgagees, according to their rank and their order of recording. The contractor, for his residue of 20,000 francs of the contract price, and the other privileged creditors and mortgagees for their remainder of 10,000 francs on the amount of their claims, become ordinary creditors; those residues are joined to the amount of all the ordinary claims; the total thus obtained will serve to calculate the dividend to receive after realising the remainder of the uncharged real and personal estate of the building owner.

If, before thinking of building, the owner charges his property with privileged debts and with mortgages duly recorded, and if the whole of these combined debts amounts to 30,000 francs, the situation of the contractor who has secured his special lien or privilege is the following:—On 130,000 francs proceeding from the property's sale, 30,000 francs will be used in priority for the payment of the aforesaid privileged and mortgaged debts; a residue of 100,000 francs remains, of which 80,000 francs will be placed in preference and priority at the disposal of the contractor, and 20,000 francs remain to be divided between the contractor and the other creditors in proportion to the amount of their respective claims.

In the intermediate hypothesis of the contractor proceeding to the first valuation after beginning the works the supposed figures must be a little modified, and the property's value at the time of the first valuation will be greater, for instance, say 60,000 francs. There remains for the contractor a surplus value of 70,000 francs, which is the limit of his privileged right. He will receive this amount out of the selling price so far as the payment of the privileged and mortgaged debts contracted and recorded prior to the recording of this first valuation leaves an available residue; for the remainder of his claim the contractor is treated as an ordinary creditor.

It is obvious that the contractor may improve his situation by getting payments on account according to the progress of the works. The figures of the last example demonstrate this. If the instalments paid during the works have reduced the contractor's claim to 50,000 francs, this residue would have been totally paid out of the selling price of 130,000 francs, whatever may be the amount of the privileged and mortgaged debts contracted on the property by the owner after the recording of the first valuation.

It may happen that the contractor delays too long in proceeding either to the first valuation or to its recording; in the meantime the owner contracts sundry privileged and mortgaged debts on the property which the diligent creditors have had recorded. In such a case the contractor has to bear the consequences of his delay. His preferred right reckoning only from the recording of the first valuation, he will only receive the amount of his claim (limited to the surplus value resulting from the double valuation) in second or in third rank. Therefore, it is absolutely necessary that the contractor acts promptly and hurries on the first valuation and its recording.

A last case may occur. The contractor fails to have the second valuation recorded within the fortnight after the reception of the work as prescribed by the law. In this event he loses his privilege. But the Belgian Law considers the contractor's claim with such great favour that it still grants to him in such circumstances a mortgage on the property to the amount of the surplus value; this mortgage ranks from the date of its recording, which is that of the second valuation.

Although Belgian contractors are entitled under their national law to the considerable advantages aforesaid, they seldom or never make use of them. They do not appear to prize the benefits they might get from the exceptionally favourable situation available to them. They do not consider that this privilege, by reducing the risk, would allow them to decrease their prices, entailing an increase of business. They fear that such an act of elementary commercial prudence may be misinterpreted as an act of injurious and unjustified distrust, and that annoyed customers may apply to less prudent fellow-contractors. Rather than risk losing a job they prefer to risk not being paid, because they are gratuitously leaving the surplus value created by their work to be alienated to a mortgagee or shared with the ordinary creditors of the building owner if the latter should fail to meet his obligations.

That is false and short-sighted reasoning. The new circumstances produced by the war will, doubtless, induce Belgian contractors to change their old and erroneous practises, and bring them to use generally those legal means of securing their claims. After the war, at the time of the restoration of their country, Belgian contractors will be obliged to ask for great facilities and long credits from their suppliers. Certainly their good commercial and industrial reputation before the war will be a weighty element in their favour, but they will mightily increase their credit facilities by availing themselves in future of the privilege accorded to them by the law. They have at their disposal an exceptional, valuable, and easy means of getting privileged claims on immovable properties, and, consequently, of being able to assign those rights and the collateral privileges attached thereto in order to secure the payment of the materials and plant furnished to them on credit. That security is a real one; for a notice of the assignment given to the building owner and an alteration of the original recording on the register of mortgages into the name of the supplier are sufficient to prevent the contractor receiving a valid payment or the owner obtaining a regular cancellation of the inscription on the register of mortgages, and thus freeing his immovable property to the detriment and without the intervention of the supplier.

2. Concerning the Special Privileges enjoyed by Suppliers of Goods to Contractors for Works for the Belgian Government.

The privilege which has been analysed applies to public as well as to private works. But, in reality, because, in principle, public property is for the most part inalienable, and on account of the rules governing public finances and the administrative hierarchy, this privilege is of no practical value in the case of works on account of a public administration. The contractor may invoke, however, the intervention of the superior authority to act on the unable or refractory minor authority; and, as a last resort, he can have a question put to the Minister to whom the administration in default is dependent, or may summon the Minister himself, if he fails to carry out obligations arising from a contract interesting his department.

If Belgian administrations should renounce the practice they have observed for years past, of reserving to themselves the execution of all public works, and concede them to private persons or to companies, the practical utility of the privilege would reappear whenever the concessionaire carries out those works on land fully conceded to him.

But as regards public works the Belgian Code of Laws contains a second advantage peculiar to Government's works, the knowledge of which is of the greatest interest to suppliers of contractors.

The period of the French Revolution introduced into Belgium a law of 26th pluviose an II. (February 14, 1794), which has received recently a formal application by a judgment of the Belgian Court of Cassation. It confers upon suppliers of contractors of works executed, or to be executed, on account of the Government an advantage which may be called the most perfect privilege in the Belgian legislation.

This law forbids the individual creditors of the contractors for Government's works to attach the funds allocated thereto. It reserves the right of attachment to two classes of creditors only, namely, the workmen employed on those works, and the suppliers of materials and other articles for the purpose thereof. But the balance which the Government may owe after reception of the works can be attached by the other creditors, after the workmen employed on the works and the traders who have supplied the articles used on the works have been paid off.

In other words, furnishers of plant and materials destined for a determinate work done or to be done on account of the Belgian Government enjoy the enormous advantage of coming before the contractor's other creditors—that is to say, before the possessors of claims which are not directly connected with that work, and also of being able to receive in priority the amount of their bills out of the funds reserved by the Belgian Government for that work. They have the right of setting aside all attachments against these funds made pending the execution of the work by creditors unconnected therewith. They have to reckon only with attachments on the part of workmen employed thereon. And when the work is taken over, suppliers of articles relating thereto may still hinder the other creditors of the contractor from receiving the balance retained by the Belgian Government, except what remains after payment of the wages of the workmen employed and of the goods supplied to the said work.

The purveyor who delivers on credit to a contractor the necessary plant and materials for a work conceded by the Belgian Government has an almost complete certainty of being paid out of the funds reserved by the Belgian Government therefor. It is sufficient to keep a watchful eye over the progress of the work and over the payment of instalments by the Government, and, in case of a refusal to pay by the contractor, without a serious motive to apply to the proper Minister in order to stop the next instalment.

The text of this special law has in view sums owing for supplies of materials and other articles serving for the construction of the works. The expression "other articles" is general and includes money advances made in respect of such a work; the banker who opens a credit to a contractor for the execution of a Government's work is a supplier of articles in the same sense as the seller of plant and materials.

One of the consequences of this excellent law, bequeathed by the Great Revolution, and which fits so well the present circumstances, is that the Government has the power but not the obligation of requiring from the contractor evidence of payment of the workmen's wages and of the suppliers' bills. The administration of the Belgian State which has not been warned by a creditor of the contractor will make its payments in the usual manner and will not take upon itself the supplementary and unpleasant task of interfering with another's business.

If attachments have been made for reasons foreign to the Government's work, or if notice of assignments has been given, and nobody objects, the Government will pay according to the ordinary rules governing attachments and assignments, and as if the law in question did not exist. Thus it is necessary, in this as in other matters, to watch the progress of and the payment for the works, and to choose a favourable opportunity to intervene.

The following is a very characteristic example of the application of this law:—

Several years ago an Antwerp contractor became bankrupt. He left in suspense the payment of the workmen's wages and the bills of some suppliers, in respect of an inclined way leading to the elevated yards of the Belgian Government's railway in Antwerp. Payment of the balance of the contractor's accounts had not been made by the State's department. The official receiver in bankruptcy obtained settlement and received from the Government payment of the outstanding sums. The workmen for their earned wages on the said work, the suppliers of the materials used thereon, and a blacksmith for the construction and the setting of an iron railing, asked, in virtue of the law of Pluviose, for payment of their claims in preference out of the sums paid by the Government to the official receiver. Several of the contractor's other creditors, who were not interested in the undertaking for the inclined way, opposed the demand and maintained that this law did not apply; firstly, because there was a bankruptcy; secondly, because prior to the bankruptcy those creditors claiming preference did not enter a preferential claim against the outstanding balance, and did not attach it; and, lastly, because the funds had been paid to the official receiver, who acted as representative of the bankrupt contractor.

This dispute was submitted to the judgment of the three degrees of jurisdiction established in Belgium.

The Antwerp Tribunal of Commerce first, and the Brussels Court of Appeal afterwards, decided that the workmen and the suppliers had under the law of pluviose an exclusive right against the money owing by the Government in respect of the undertaking, on which they had co-operated, so long as it remained unpaid, and that the official receiver in his capacity as liquidator of the contractor's liabilities received the residue of the undertaking's price subject to the formal and special provisions of the law of Pluviose. The Belgian Court of Cassation ratified by its supreme authority those decisions on the application and the interpretation of this law.

3. Concerning Building-Owner's Right to Cancel Contract in Certain Circumstances.

Alongside of those two marked advantages the Belgian Law contains some great inconveniences for the contractors.

In consequence of an article of the Civil

Code the building owner has the right of cancelling at will a contract for a lump sum.

This provision derogates from one of the fundamental principles of law, *i.e.*, the compulsory force of a contract, as thus declared in an another article of the Civil Code: "Contracts lawfully made take the place of the law for those who have made them; they cannot be revoked except by mutual consent or for reasons authorised by law; they must be carried out in good faith."

In the first-mentioned article the Civil Code modifies this latter fundamental article. A simple act of will on the part of the building owner, whatever may be the motive, is sufficient to suppress the compulsory force of the contract for the undertaking. The contractor cannot prevent this, neither on this point have the courts power to consider the motives of the building-owner. It is enough for the latter to affirm positively his will to cancel the contract to make the cancellation binding on the contractor and on the courts. The manifestation of this will may be made at any time, before beginning the works as well as pending their progress.

This exorbitant power granted to the building-owner needed an important corrective. In the measure of possibility it was necessary to prevent the owner acting by caprice or in bad faith. Therefore, the Civil Code adds that the owner who makes use of his right of cancellation at will must indemnify the contractor (1) for all his expenses, (2) for all his works executed, and (3) for all the profits he might have made out of the undertaking.

The obligation to indemnify the contractor will cause the building-owner to think twice before acting in that way. The wide and general words used by the law to enumerate the elements of damages to be contained in the drawing-up of the statement of damages include all causes whatsoever of indemnity in relation to the undertaking thus cancelled.

Thus the words "all his expenses" comprise all preliminary expenses as well as subsequent expenses made by the contractor in view of the undertaking: studies, sounding of ground, correspondence, wages of employees and workmen, purchases of materials and plant, capital engaged, cost of survey, insurances, etc.

Similarly, the words "all his works" contain the necessary preparatory works—for instance, draining of the site, bringing to it the requisite water for the uses of the work, construction of approach ways, etc. These words apply likewise to works realising the immediate object of the undertaking, such as piles, masonry in foundations and above ground, beams, girders, anchorages, etc.

Lastly, the words "all the profits he might have made out of the undertaking" mean that without any distinction all that in the carrying out of the undertaking may yield to the contractor any profit shall be paid by the owner. Those wide expressions comprise also the moral damage arising out of the injury to the professional standing and commercial and industrial reputation of the contractor, as well as profits on materials, on plant, on wages, on capital, etc.

A first important remark ought to be made. If the owner may cancel the contract by his own will, the law declares that he may only do so on indemnifying the contractor. That means that the contract is cancelled in exchange for damages. In other words, it is only after having been paid the damages caused by the building-owner's action that the contractor ought to suffer the cancellation of the contract, deliver the work such as it stands, and disappear from the site. Until then the contract is suspended in this sense—that the contractor is no longer bound to keep on with the work; but until that time also the contract remains in force, in this sense—that the contractor retains possession of the property and also keeps the risks of the work. He is bound to carry out his obligation of yielding up the site and the works, but only in return for payment of all owing to him. He has the right to detain the property until the day of this payment.

A second observation is that those damages arising out of the cancellation of the contract of undertaking are protected and secured by the lien law analysed in sect. 1. So that if the contractor before beginning the works has taken the wise precaution of proceeding to the first valuation and to its recording, he may in case of cancellation have recourse to the second valuation and its recording. The use by the owner of his right of cancelling is tantamount to an affirmation that the works are finished. Consequently the surplus value added to the property by the works is available as subject to the contractor's lien; it may and ought to be estimated on the day the owner uses his right of cancellation.

It will be at once evident how considerable is the defence that the contractor has against the caprice or the bad faith of the building-owner. The recording of the contractor's privilege tends to induce the cancelling owner to settle quickly the account for damages, since he is interested in freeing his property from the recorded claim. The contractor is and remains over against the owner a privileged creditor for the whole amount of his claim, and he is only bound to authorise the cancellation of the inscription on the record of mortgages after payment of the last farthing of the whole sum owing to him. A variation of the privileged right of the contractor to the above-mentioned surplus value takes place in respect of the claims of the other creditors of the owner, and takes effect when, seeing the impossibility of the owner paying his debts, the property charged with the privilege has to be sold, and the proceeds thereof then fall to be divided among the creditors according to rank.

A third remark is that the article of the Civil Code limits the owner's right of cancellation to agreements for a definite fixed price. But legal writers admit and teach that the owner has the same right when the work has been undertaken for measure and value.

A fourth remark is that the right of cancelling is reserved to the owner against the contractor, and that the latter has not the same right against subcontractors to whom he may have entrusted a part of the principal undertaking.

4. Concerning the Determination of a Contract in the Event of the Death of the Contractor.

The second inconvenience for contractors is created by another article of the Belgian Civil Code, which declares cancelled by the contractor's death a contract for the letting of work (such is in Belgium the generic legal name of the undertaking contract). This article applies to both the parties, and is a derogation of the principle that heirs are bound by the debts of their author. The reason thereof is that the personal character of the contractor is one of the main motives of the undertaking agreement. And indeed the personal ability, professional skill, honesty, punctuality, solvency, and reputation of the contractor are determining reasons in causing the owner to contract.

The general imperative terms of the law "declares cancelled" seem to imply an effect produced inevitably by the death of the contractor. That is not so. The article of the code gives to the owner and to the heirs of the contractor a choice. Consequently there ought to be on one side or on the other an obvious manifestation of intention. Without that the undertaking agreement goes on, and the works are finished by the contractor's heirs or by their representative on their account. This is, after all, what happens usually.

If one of the parties bound by the contract chooses cancellation the owner has to pay to the contractor's succession the value of the executed works and the prepared materials in proportion to the agreed price, but only when these works and materials may be useful to him.

The obligation of the owner in this case is consequently determined in other manner than that of the owner who cancels the contract by his own will. The reason of this difference is simple. The law considers the contractor's death as some sort of fortuitous event giving rise to settlement of the accounts of undertaking, but not to damages. What returns to the contractor's heir is an amount proportioned to the undertaking price—that is to say, an amount to be calculated by a valuation or a comparison between the agreed price and the value of the executed part of the work. When the death happens after the contractor had already purchased the materials and plant after he had carried out the preparatory works, the return to the contractor's succession ought to be estimated according to the usefulness the purchase of materials and plant and the preparatory works may have created for the owner.

The text of the law which determines the claim of the contractor's heirs speaks of works and materials which may be useful to the owner. The word "useful" should not be understood in its ordinary sense, and limited in consequence to the obligation of the owner to pay for the works which yield a pecuniary profit, for the undertaking may have as its exclusive object an expenditure on luxury, such as decoration, ornamentation, carving, which afford to the owner in the shape of æsthetic satisfaction all that he would obtain from the contract.

It is proper to point out that cancellation of the undertaking and payment of the claim of the contractor's heir are intimately connected, and that the cancellation becomes complete only after payment of the amount due to the contractor's succession. Until then the heirs are entitled to retain the works and the site.

We may understand also all the advantage the heirs may get from the situation, when the contractor has taken the precaution to secure his privilege. Because the legal cancellation of the undertaking stops the works and fixes the rights of both parties on the day of the death, and consequently the second valuation defining the surplus value arising out of the works done up to then may be drawn up and recorded.

THE PROPERTIES OF LIMES AND PLASTERS.—I.

In the rush of modern construction those responsible for building are apt to spend but little time upon assessing the properties of their materials, often relying wholly on the standing and integrity of the firms which supply the "food" of the building trades, and many is the man who will state that he does not believe in the tests of the scientist, but prefers his own judgment based on general experience. Such an individual has probably been more fortunate than wise, for though serious troubles due to faulty materials perhaps come seldom, when they do come they are usually far-reaching in character. Now, a brick or a piece of stone or timber can be judged to a very large degree by mere inspection by any experienced person, and there is, therefore, some excuse for the attitude referred to in dealing with such substances; but when a material is presented in powder the opportunities for adulteration are so greatly increased, and the scope for tests applicable to solids in large pieces are so appreciably reduced, that no apology seems necessary for setting out the principles which underlie the proper manufacture and use of limes and plasters with which it is proposed to deal in this and following articles.

Although the expression "plaster" is used to cover a great many different substances, the term will be employed here in the more modern and restricted sense to indicate materials which have as their essential basis sulphate of lime. This definition excludes ordinary three-coat work, the composition of which will be dealt with under "Limes."

Sulphate of lime is found in transparent, well-shaped crystals known as selenite, which are common in the London clay, and are known by the clay-workers as "petrified water," but is found to a much larger extent as gypsum, which, though it has the same composition, is very different in appearance, being usually found in white masses, often showing a fibrous, silky texture. This mineral is the source of all the important plasters, such as Serapite, Keene's and Parian cements, and plaster of Paris. It is found in a remarkable state of purity for a material mined on a large scale, but is associated with small quantities of carbonate of lime, silica, magnesia, alumina, and iron. The last-mentioned is detrimental to the colour of the material, giving it a pinkish tinge.

The process of manufacture is a simple one, and consists of crushing and grinding the mineral, which is not hard, but has a peculiar toughness due to its fibrous nature, and then heating it to expel not only moisture but water present as an essential in its composition.

As an understanding of all materials which "set" is impossible without an appreciation of this "water of crystallisation," as it is termed, a few words on this subject are essential. Many mineral and prepared chemical substances when deposited in the solid form by evaporation of a solution of such bodies in water appear in regular forms with bright flat faces, making definite angles with one another—crystallised sugar is a familiar example—and in many but by no means all cases the substance in crystallising takes up water, not as a liquid entangled in its pores, but as a part of its composition, definite in amount and essential to its shape and many of its other properties. Such "water of crystallisation" combined with the compound in a solid condition is usually expelled fairly easily by heat, when the substance loses its regular shape and falls to powder. In some cases the whole of this water is equally readily expelled, but in others the last portion of it is so firmly held to the rest of the material that it can only be removed at a high temperature or by complete decomposition of the substance proper. When a material which has this tendency to combine with water is deprived of it—that is, dehydrated—it usually tends to absorb water when mixed therewith or placed in a moist atmosphere; and, if the amount of water is sufficient, this absorption will be attended by a recrystallisation of the material, a very important feature of this process being the increase of bulk with which this is generally accompanied. The above facts form the basis of the usually accepted theory of the "setting" of plasters, limes, and cements, and, though the explanation is not universally accepted for the last two classes, it is so as far as plasters are concerned.

To return to the formation of plasters from gypsum. After the mineral has been ground it is heated to a temperature somewhat above that of boiling water, namely, to between 330 deg. Fahr. and 395 deg. Fahr., which must be carefully regulated, because the operation is designed to expel not the whole but only three-quarters of the water of crystallisation contained. Chemically gypsum consists of calcium (a metal), sulphur, oxygen, and water, and is represented by the formula $CaSO_4 2H_2O$, and the expulsion of water as follows :—

$$2\,(CaSO_4\,2H_2O) = \begin{matrix}CaSO_4\\CaSO_4\end{matrix}\!>H_2O+3H_2O \text{ (water expelled),}$$

and the substance formed is known as plaster of Paris.

The operation is conducted usually in large iron cylindrical vessels, known as "kettles," which hold six to as much as twelve tons of gypsum, the larger sizes being some 8 ft. high and 10 ft. in diameter. Heat is applied gradually while the material is fed in, and, as much moisture is always present (apart from the water of crystallisation), the material becomes liquid and boils at a temperature but a few degrees above that of water. When this moisture has been expelled the substance settles down and becomes solid, but boils again as the temperature rises and the combined water is removed. When three-quarters of the combined water have been expelled, the liquid is allowed to run out and solidifies as plaster of Paris. Sometimes rotary plants are used somewhat similar to those employed for cement making, but on a smaller scale, in which case the grinding generally follows the calcining process.

What has been said above refers strictly to the treatment of very pure forms of gypsum, but for many purposes plaster of Paris thus formed is too brittle and quick-setting, and for wall surfaces gypsum containing some natural impurities which modify the properties of the plaster is employed or ingredients in very small quantities are added. To decrease the rate of setting, powdered glue or other organic substance, to the extent of a few pounds per ton, is usually added, which is best done after the gypsum has been calcined and cooled, with the aid of a mechanical mixer.

Keene's Cement.

Among the many hard plasters formed by adding ingredients to burnt gypsum, Keene's cement may be cited as by far the most important. In this case the mineral is heated in small kilns to a red heat, being thus deprived of all its water of crystallisation, and a very pure gypsum is required for this manufacture. The lumps of calcined mineral are then immersed in a solution of ordinary alum (about ten parts of alum to ninety of water), dried and again heated to redness, when it is cooled and finely ground. Keene's cement (which should be called "Keene's plaster," for cements belong to a different category) sets comparatively slowly, and until nearly hard can be knocked up again and re-used without detriment, a fact which is not generally recognised, and might often be taken advantage of when errors or alterations occur and the necessary changes can be made while the work is still "green."

Flooring Plasters.

Considerable use has been made in Germany, though not much elsewhere, of the fact that gypsum when heated to a temperature above 400 deg. Fahr. and ground, forms, when mixed with water, a plaster which sets slowly but develops great hardness, so much so that it can be used as a flooring surface. The usual belief is that if gypsum be heated until the whole of its water of crystallisation is expelled, it becomes "dead burnt," and is incapable of setting at all on the addition of water. But the true facts appear to be that if gypsum is heated for a limited time to a moderate temperature, say, 400 deg. Fahr. to 500 deg. Fahr., although the whole of its water is expelled it will set with water slowly to a very hard solid, but should the heating be very long continued or performed at a very high temperature it really does become "dead burnt," and will not then set at all.

Flooring plasters should be used on a good foundation, which will allow them to dry evenly, and must not be exposed to moisture when hardening. Properly laid they form a very durable surface. They may be used mixed with inert aggregates, such as sand, but only with a degradation in quality in proportion to such aggregate added.

Properties of Plasters.

But little difference will be apparent in the general appearance of many plasters in the state of powder, though freedom from colour is an obvious quality to be sought for many uses. The presence of glue or other organic "retarder" may be surmised by heating a little of the material by means of a smokeless flame upon, say, a piece of clean sheet-iron, when the charring of such matter will produce a greyish tint in the powder. Similarly any iron compounds will, under a like test, produce a pinkish tinge due to the formation of red oxide of iron. As the actual compositions vary so slightly, analysis by an expert chemist is required to detect most other possible ingredients.

In the case of Portland cement, specific gravity—that is, the weight of the material, bulk for bulk, as compared with water—is, of course, a most valuable guide to its character, and, though tests are seldom made on plasters, it may be useful to state that the true specific gravity of plaster of Paris is about 2·57 (*i.e.*, it is very slightly more than two and a half times as heavy as water), and as measured in powdered, in the manner which would be adopted in using a cube foot box after the style of the old "striked bushel," the specific gravity is about 1·8 or 113 lb. per cubic foot. These figures will vary but very slightly for all the true plasters which will be described.

As to fineness, if 70 per cent. of the plaster pass through a sieve containing seventy-four holes per lineal inch, or 50 per cent. through a 200-hole sieve, the result may be regarded as satisfactory. In making this test it is hardly necessary to point out that the sieve and material must be carefully dried to prevent any clogging.

The strength of plasters is not a subject which usually receives any attention, but the following summary of facts culled from experiments should be of value :—

Plasters attain almost their full strength after about a week from laying, but the increase takes place slowly up to about a month. When mixed with inert material such as sand, the strength added after a week is much less than when they are used neat.

The tensile strength of neat plaster may be as much as 400 lb. to 500 lb. per square inch. Sand much reduces this strength, and plaster and sand 1 to 3 may have but little more tensile strength than 100 lb. per square inch. The adhesive strength of neat plasters to a smooth brick surface should be about 60 lb. to 80 lb. per square inch after a week, increasing to something over 100 lb. in a month.

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ELECTRIC LIFTS.

MR. H. MARRYAT, M.Inst.E.E., read a paper on "Electric Lifts" at a meeting of the Association of Supervising Electricians on December 14, in the course of which he said :—

"I propose to deal only with the usual types of lifts found in domestic and business premises in London, to indicate the chief points which go to distinguish a good lift from a bad one, and to give you a few practical hints upon upkeep and maintenance.

It is only in the case of service lifts, where no person can travel with the lift, that the factor of safety both as regards the strength of materials and number of safety devices can be properly reduced. No matter for what purpose the lift may have been constructed—it may be for conveying coal, or flour, or what not—if the car is large enough for persons to travel by, then sooner or later it will be used for that purpose. Bearing this in mind, all such lifts should be constructed to be as safe as the ordinary passenger lift. When a lift is constructed without this full margin of safety, then the car should be either too small for a person to enter or so fitted with fixed shelves as to make this equally impossible. My experience is that no form of notice or warning is sufficient to prevent a man risking his life if it will save him a little stair or ladder work.

Leaving on one side a number of special and eccentric designs, and taking no account of an equal number of monstrosities, lifts may be broadly divided into two classes—that is to say, sheave-driving lifts and drum-driving lifts.

Each of these classes may be again divided into top-gear lifts and bottom-gear lifts—that is to say, lifts in which the gear is situated at the top of the well, immediately over the car, and lifts in which the gear is placed elsewhere; for, although with bottom-gear lifts the machine is usually situated at the foot of the well, it is not necessarily so placed, but for convenience may be fixed upon any floor, and for special reasons it is sometimes placed more or less remote from the lift well, the ropes being led from the driving sheave or drum to the car and counterweight by means of guiding sheaves.

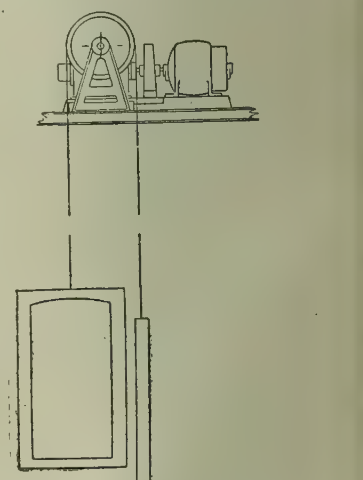

Fig. 1. Diagram of top gear lift arrangement.

All these lifts work upon the see-saw principle. Not only are the car and the attendant, if any, fully counterweighted, but also a proportion—usually 40 per cent.—of the maximum load. Under these conditions, the lift descending empty will take almost as much power as when ascending fully loaded, and exactly the same power as when ascending with 80 per cent. of full load. On the other hand, with an average load of 40 per cent. of full load it will take practically no power either ascending or descending. It is this system of counterbalancing part of the load which secures for the electric lift its extraordinary efficiency.

Comparing electric with hydraulic lifts, the first cost is very much the same. A completely automatic electric lift may cost a little more than an ordinary hydraulic lift, but no attendant is required with the automatic lift, whilst one is needed in the other case. In the running costs there is little ground for comparison; the electric lift, properly constructed, costs less all the time. With a hydraulic lift the quantity of water used is the same whether the car be fully loaded or quite empty—in fact, no matter what the load may be; but, as we have seen, an electric lift will carry its average load at practically no cost.

Mr. H. C. Crews, M.Inst.E.E., in a paper read in 1906, analysed the energy cost of a large number of electric and hydraulic lifts. The conclusion he arrived at showed that electric lifts cost less than a quarter as much to run as did similar hydraulic lifts. Some of his examples, taken separately, showed more favourable results, and my own experience is that modern electric lifts cost for electric current about one-tenth of the water bill for similar hydraulic examples. When carefully balanced the energy for starting and accelerating an electric lift exceeds that of the actual running, so that a skilled attendant will effect great economy over an unskilled one, who will sometimes make two or three shots before attaining floor level. In this respect a push-button automatic lift gives a maximum of economy, because it only makes one start for each journey and automatically finds its own floor level.

We have a very useful practice in my own firm, which I have never noticed elsewhere, of applying counters to the controllers. These counters register the number of journeys made—that is to say, the number of times the motor is started and stopped. With an automatic lift each journey must be at least the distance from one floor to another, and will average about half the full travel of the lift.

As further corroboration of the extraordinarily low running cost of electric lifts, the Chief Engineer of the Westminster Electric Lighting Company informs me that in respect of fifty electric lifts operating in their district, the current consumption for the past twelve months has been 53,000 units, or only 1,060 units per lift per annum. The car lights, taking a considerable amount of energy, are usually included with the energy cost for the lift.

With regard to the important item of maintenance cost, the balance is again in favour of the electric lift. A hand-rope or car-switch lift operated by an attendant, which is the only type of lift which may be fairly compared with a hydraulic lift, will cost 25 per cent. less to maintain than its hydraulic equivalent. A completely automatic electric lift will cost no more to maintain than a hydraulic one, with the additional economy of the attendant's salary, which in itself will be about five times the total maintenance cost. When a hydraulic lift has to be taken out of a building for any reason its scrap price will hardly pay for the cost of removal, whereas, on the contrary, in the case of an electric lift there is no difficulty in adapting it for another position. If I have seemed to dwell rather long upon this matter of comparison between electric and hydraulic lifts, it is because many of you must be frequently asked to express an opinion on this very question, in which case I hope you will find these facts and figures useful.

A matter which is very distinctly within the province of the supervising engineer is the adjustment of lift counterweights. As supplied by the makers, the counterweight consists of a wrought or cast iron frame made up to about equal the weight of the car, and a number of cast-iron slips with which a suitable balance to the average load may be made up.

The manufacturer, not knowing what the average load is going to be, has only the maximum load specified in the contract to guide him, and he usually assumes the average load to be 40 per cent. of full load, and balances accordingly. After the lift has been got to work for some time this estimate may prove to be quite wrong. The owners, in their anxiety to be on the right side, may have specified a maximum far in excess of probable requirements, or, for the sake of economy, they may have specified it so low that the average load carried is very nearly the maximum the lift is designed for. This often happens in the case of goods lifts.

Let us suppose that two quite similar lifts have been erected, but that one is balanced for a maximum load of 5 cwt.—that is to say, 2 cwt. of load counterbalanced—and that the other is balanced for a maximum load of 20 cwt., in which case 8 cwt. of load would be balanced. Now, it is quite possible that the actual average load in both cases will be that of two persons, or, say, 250 lb. The 20 cwt. lift will cost practically nothing to take its two passengers up, as current will only be required to release the brake and start the machine. The counterweight then takes control and does the rest. On the downward journey, however, provided the two passengers are so kind as to use the lift, 896 lb. of counterweight must be raised against a load of 250 lb., making a nett weight of 646 lb. to be raised. If the passengers prefer to walk down instead of using the lift, as they sometimes do, the weight to be raised before the car is at the ground floor ready for the next trip is 896 lb. Taking the up and down journeys together, the average work done is equivalent to raising 323 lb. if the passengers use the lift coming down and 448 lb. if they do not.

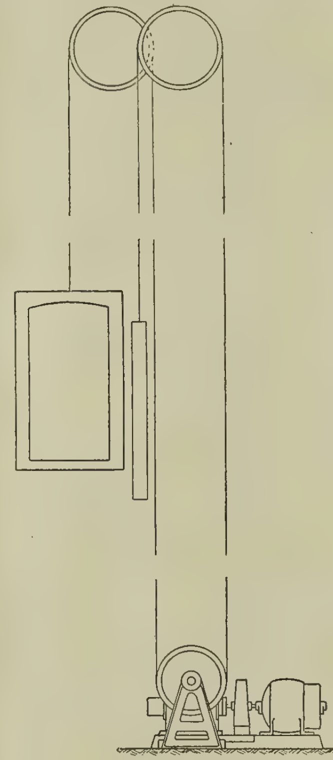

Fig. 2. Diagram of bottom gear lift arrangement.

Compare these figures with the results obtained from the other lift. In this case the difference between weight of counterbalance and the actual average load is only 36 lb., the load consisting of two persons being the heavier. On the upward journey 36 lb. has to be raised, and on the downward journey the load will take control, and practically no current will be drawn from the mains. If the passengers elect to walk down, 224 lb. has to be raised to bring the car to the ground floor. Taking the up and down journeys together again, we find that the work done is equivalent to 18 lb. raised in the one instance and 121 lb. in the other. So that if the passengers use the lift on the downward journey the current consumption of the lift balanced for 20 cwt. maximum load will be eighteen times as much as the other, and if they walk down it will be four times as much. The result of a day's work upon these two lifts will show that the one has run the meter up about ten times as much as the other.

You may accuse me of having taken an extreme case. I have done so purposely to prove the principle which is true of all lifts, and I can point to actual economies of 50 per cent. and upwards which have been effected by attention to the correct counterweighting of lifts to the average load, which, it must be remembered, is a factor which can only be discovered after the contractors have erected the lift and handed it over to the owners. In fact, it is a matter essentially for the supervising engineer to know something about, and to watch in the interest of his employers. The adjustment is effected by adding to or removing from the counterweight a suitable number of the cast-iron slips supplied with the lift by the makers. By adjusting the counterweight in this way to the average load the fact must not be overlooked that the maximum lifting power may be reduced; but this is frequently of small consequence compared with a large saving of the annual current bill. Before proceeding to describe the various parts which go to make a lift it will be well perhaps if I say a few words as to the relative advantages of top and bottom gear lifts.

Architects often exhibit a regrettable disregard for the requirements of the lift engineer, who frequently finds no adequate provision for placing the lift gear, and is often met with obstructions in the lift well, such as pipe-runs or set-offs in the brickwork, which might have been avoided, and which can only be circumvented with the greatest difficulty. The question of a pit—an essential if a lift is to serve the basement level—is frequently overlooked, and drains are run beneath the well, so that no proper pit can be constructed. The result is often a compromise, and a pit which should be 30 in. deep is reduced to 18 in., a condition which is unsatisfactory in the extreme, and often dangerous. For no other reason than the architect's oversight, many lift gears are fixed in positions involving considerable expense in installation and so much difficulty in subsequent maintenance that the work is never properly done.

The best place for a lift gear is at the top of the well, immediately over its work. Here the maximum of efficiency is attained and the number of parts to be maintained is reduced to a minimum. In this position the length of the ropes is only one-third that of the ropes for a similar lift, if the gear be fixed at the foot of the well. As rope renewals form the most expensive part of the upkeep of a good lift, this is a matter well worthy of consideration. A properly-constructed weather-proof room of ample dimensions and easily accessible should be provided in which to house the gear. If a top-gear lift is to serve the top floor, this house must be built upon the roof. The only objection to the gear being fixed at the top of the well arises from the possibility of noise and vibration being transmitted to the rest of the building. This difficulty should be met by good engineering and sound architecture. It is of primary importance that the lift gear should run noiselessly and free from vibration, and it is only upon the assumption that sufficient excellence in this direction is unobtainable that any argument can be found for placing the gear at the foot of the well, in which position a firm foundation and isolation from the rest of the building is more readily obtained. To prevent the transmission of noise and vibration to the building the bedplate may be anchored to a block of concrete of ample weight, which, in turn, is bedded upon sand and isolated from walls and footings by more sand. A thin cover of soft asphalt may conveniently be used to cover the sand surrounding the concrete bed.

In modern buildings of steel construction the difficulties arising from this source are greatly enhanced, and in such cases, supposing absolute quiet to be essential, every possible precaution must be taken to ensure that no rigid connection exists between the gear and the building."

The remainder of an extremely interesting paper, which we regret we have not space to give, was taken up by a description of the various parts of a lift, a subject for experts rather than architects.

BUILDING MATERIAL PRICES.

IN revising our prices for the first week of the New Year we thought it might interest our readers to give a table comparing these with the prices issued in our New Year's Number for 1915, thus showing at a glance the effect the war has had on the principal materials used in the building trades.

BRICKS, ETC.	Advance Price £ s. d.		Approximate Increase Per Cent.
Stocks Bricks	0 3 6	per 1,000	10
Fletton ,,	0 2 0	,,	6
Thames Sand	0 0 9	per yard cube	10
,, Ballast	0 1 0	,, ,,	20
Portland Cement	0 8 0	per ton	21½
Blue Lias Lime	0 1 0	,,	5
Grey Stone Lime	0 3 0	per yard cube	20
WOOD.			
Best Building Red—			
Deals	3 0 0	per standard	20
Battens	3 15 0	,,	20
Scantlings	4 7 6	,,	30
Joiners' Wood—			
White Sea First Quality Red:			
Deals 4 in., 3 in., 2 in by 11 in. or 9 in.	1 5 0	per standard	3¾
Battens 7 in. and 8 in.	0 12 6	,,	2¾
Archangel White:			
Best 3 in. by 11 in.	6 15 0	,,	31⅓
,, 3 in. by 9 in.	7 0 0	,,	37
Prepared Floorings and Matchings—			
Second Swedish Red and Equal:			
1 in. by 7 in. Planed and Matched	0 3 0	per square	20
1¼ in. by 7 in. ,, ,,	0 5 6	,,	30
Hardwoods:			
Kauri Pine	0 1 0	per foot cube	15
Oak Logs	0 1 0	,,	20
Dry Wainscot	0 0 1	per foot super. as 1 in.	10
Dry Walnut	0 0 1	,, ,, ,,	10
Java Teak	1 0 0	per load	5
METALS.			
Joists, Girders, etc.—			
Rolled Steel Joists, ordinary sections	7 5 0	per ton	75
Compound Girders and Stanchions	6 10 0	,,	50
Angles, Tees, etc	5 0 0	,,	50
Cast-Iron Columns, etc.	4 10 0	,,	50
Iron—			
Common Bars	6 10 0	per ton	75
Staffordshire Bars, etc.	6 15 0	,,	75
Mild Steel	6 15 0	,,	75
Hoop Iron	7 0 0	,,	75
,, ,, Galvanised	9 10 0	,,	50
Sheet Iron—			
Black Sheets	5 15 0	per ton	50
Galvanised Sheets	9 0 0	,,	55
Galvanised Corrugated Sheets	10 0 0	,,	65
Cut Nails	5 0 0	,,	40
LEAD, ETC.			
Sheets, Pipe Coils, etc.	12 10 0	per ton	50
Copper—			
Sheets, Nails, etc.	0 0 2	per pound	15
Oils, etc.			
Linseed, Raw and Boiled	0 1 8	per gallon	75
Turps	0 1 7	,,	75
White Lead	13 0 0	per ton	45
Red Lead	13 0 0	,,	45

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Bedford.—Plans passed by the T.C.:—New workshop, for Wynward Cycle Company, St. Cuthbert's-street; iron roofs, for Mr. Atterbury, 2, Becket-street; iron roofs, for Mr. F. Corby, 62, Beaconsfield-street; lavatories, Electricity Works; covered shed for boiler, for Bedford Fire Brigade; and extensions, lavatories, etc., for Mr. J. A. Hague, Mill-street.

Bentley.—The L.G.B. has held an inquiry into the application by the U.D.C. for permission to prepare a town-planning scheme.

Bradford (Wilts).—Approval has been given to plans by Mr. W. T. Marsh for the conversion of No. 1, Trowbridge-road into two houses.

Exhall and Foleshill.—The directors of the L. and N.W. Railway Company have in contemplation the carrying out of an important scheme for extensions of siding accommodation on their Nuneaton and Coventry branch at the Hawkesbury-lane and Longford and Exhall stations.

Finchley.—Plans passed by the D.C.:—Additions, "Homewood," Cyprus-avenue, Mr. A. H. Hale; four houses, Lyndhurst-gardens, Mr. J. C. Williamson; soil and surface-water sewers, Ringway, connected with Addison-way, Copartnership Tenants, Ltd.; motor garage, etc., Westbury-road, Mr. A. Pirie; motor garage, "Laleham," Dollis-avenue, Mr. W. M. Shanley; three houses, Fallowcourt-avenue, Mr. A. Dowdall.

Glasgow.—At Glasgow Dean of Guild Court recently linings were granted to Messrs. Carsons, Ltd., chocolate manufacturers, 49, Solway-street, to add to their works there; Messrs. J. & T. Boyd, Ltd., engineers, to extend their premises in Old Shettleston-road; the Glasgow Eastern Co-operative Society, Ltd., 34, Dalmarnock-road, to alter buildings in Westmuir-street.

Halifax.—At a recent meeting of the T.C. the Council was asked to apply to the L.G.B. for their sanction to the Corporation borrowing £5,558, the additional cost in connection with the purchase of plant required for the electricity works. Also to sanction a proposal by the Waterworks Committee to lay 550 yds. of main from Mixenden Reservoir to the works of Mr. J. W. Bulmer, Hays Mill, Mixenden, at an estimated cost of £500. The Improvement Committee have resolved that the Town Planning Sub-committee be appointed to confer with the Sub-committee appointed by the Health Committee on the question of a housing scheme and report.

Hendon.—The Town Planning and Building Applications Committee has given its approval to the following:—Cottage flats, Erskine-hill, Mr. A. F. Garrow; house, Rotherwick-road, Mr. F. W. Bristow; boiler house, Renters-avenue, Hendon, Messrs. Johnson's Manufacturing Chemists; hangar, Booth-road, London and Provincial Aviation Company; out-buildings, Schweppes' Factory, Hendon, Messrs. Schweppes; additions, Hendon Hall, Hendon Hall, Ltd.; motor house, 1, Goodwyn-avenue, Mill-hill, Mr. E. J. Clarkson; tool and bin house, Meadway-court, Co-Partnership Tenants, Ltd.

Henley.—The Council has passed plans for motor garage in Rivermead-road, for Messrs. Hobbs & Sons, Ltd.

Leamington.—Alterations and additions are to be made to the Warneford and South Warwickshire Hospital, Leamington, to provide fresh accommodation for the X-ray and electrical department, which is at present at the basement of the premises. The present nurses' sitting-room is to be converted into the new X-ray department, and a new nurses' wing is to be built. The annexe to the nurses' home will cost £900, and the X-ray and electrical installation £300.

Malvern.—At a recent meeting of Worcester E.C., held to consider what accommodation should be secured for Worcester children in the open-air school at Malvern, it was reported that guarantees had been given by city gentlemen to the amount of £500, to provide an extension of the school.

Manchester.—The City Council propose to spend £79,000 on new works at Longdendale, to afford protection from damage through floods, and to increase the storage capacity of the reservoirs. The Trafford Park Estates, Ltd., propose to construct light railways from Trafford Park to Lostock, passing through the parish of Davyhulme and the urban district of Stretford.

Mutford and Lothingland.—The R.D.C. has accepted an estimate for certain drainage work at Bradwell.

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* See also our list of Competitions Contracts, etc., on page 38.

Newcastle.—The Town Improvement Committee has approved plans for the erection of a new picture hall in Back-street, Newcastle.

New Zealand.—H.M. Trade Commissioner in New Zealand has forwarded extracts from the local Press, from which the following particulars are taken:—The ratepayers of Auckland have authorised the municipal authorities to raise a loan of £115,000 for the purpose of carrying out the following works:—Erection and equipment of market buildings, £55,000; establishment of a fish market, £20,000; water supply in Grey Lynn, £10,000; construction of drainage works at Remura, £30,000.

Northampton.—The T.C. has approved plans of three new houses (King Edward-road and Cedar-road).

Ripon.—The City Council has decided to proceed with the erection of six additional fresh water baths at the Spa Baths, costing £250.

Ruskington.—The U.D.C. has passed a plan for a new dairy (Mr. W. H. Silson, Manor-street).

St. Germans.—The R.D.C. has passed plans for a bungalow at Anderton, for Miss Llewellin.

St. Ives (Cornwall).—The T.C. has approved of a plan presented on behalf of the Salvation Army of premises proposed to be erected at the New Pier.

Southend.—Plans approved by the T.C.:—One bungalow, Marguerite-drive, Mr. T. W. Cook; one bungalow, Hamstel-road, Mr. J. J. Going; three houses, North-avenue, Mr. F. H. Farnborough; house, stable, and cowshed, Southbourne-grove, Mr. T. Coates; alterations and additions, 40, Prittlewell-street, Mr. C. Floyd; one bungalow, Blenheim-crescent, Mr. S. Sharp; two bungalows, Marguerite-drive, Mr S. C. Arnold; alterations, "Mornington," Drake-road, Mr. P. J. Hobbs; additions, "Clovelly," Fermoy-road, Mr. T. Blackall; lantern loft, church of St. Paul, Summercourt-road, Rev. A. Waller; two bungalows, Leigh Hall-road, Mr. H. Bridge; alterations to roof, 44, Clarence-road, Messrs. Tolhurst & Cozens; roadway off East-street, Great Eastern Railway Company.

Staines.—The R.D.C. has approved a plan from Mr. Evans, of Cranford, for two cottages in Tentlow-lane, Cranford.

Sunderland.—A plan has been approved by the Corporation for the building at Holmeside of a block of seven shops, with billiard-rooms above and at the back. They are to be erected for a Newcastle firm having billiard saloons in several centres in the north-east district.

Uxbridge.—The U.D.C. has approved plans for flour store at 3, Cowley-road, for Mrs. F. Davis.

York.—The Streets and Buildings Committee of the York Corporation has approved of the following plans:—Mr. W. C. Oliver, temporary shed, Priory-street; Rev. P. J. Shaw, temporary shed, 28, Tanner-row; Mr. T. Morris, temporary shed, Escrick-street; Mr. A. Danby, temporary shed, 18, Hawthon-street; Yorkshire Insurance Company, Ltd., lavatory, St. Helen's-square; Mr. G. E. Barton, alterations to stables, 25, St. Mary's; Miss Milner, motor garage, Heworth Moor House, Heworth Green; Messrs. T. Cooke & Sons, Ltd., sheds, Cromwell-road; Mr. T. Belt, combined drainage, 28, 29, and 30, Charles-street.

GENERAL BUILDING NEWS.

EMPIRE, CARDIFF.

The Cardiff Empire has recently been opened after reconstruction. The front of the building in Queen-street is of Portland stone. The central openings lead into a porch, the walls of which are lined with Welsh marble, and then by a staircase to the waiting halls. The auditorium is divided into fauteuils, stalls, and pit stalls. Above is the grand circle, and above that the balcony and gallery. There are 1,200 tip-up chairs on the ground floor. There is accommodation in the grand circle for 500, seats for 570 in the balcony, and for 550 in the gallery. The private boxes occupy the usual side positions and extend right round the grand circle. Messrs. William & T. R. Milburn, Sunderland, are the architects, and Messrs. Turner & Sons, Cardiff, chief contractors.

NEWCASTLE-ON-TYNE CITY LUNATIC ASYLUM.

The last of the buildings forming the recent extension of the Newcastle City Lunatic Asylum has just been handed over. They comprise two villa blocks for forty patients each, nurses' home for fifty-six, and an isolation hospital for six patients. The villa blocks are built of brick walls faced with Lowry's Pensher pressed bricks; there is a half-inch cavity behind the outer facing filled in vertically with Callender's Bitubond. The walls of nurses' home and hospital are of stone; all the roofs are covered with Port Dinorwic slates, floors of Fawcett's Monlithcrete system, woodwork of deal and stained (part with Solignum); the plastering is of Victorite except the hospital, which is Albine cement; the ground floors are of pitch-pine boards and upper floors of deal blocks; heating is by hot water with radiators

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6¼	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¼	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8½	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8½	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	10½	10½	10½	9¾	10½	9½	7½	7½	7½
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¼	9	8½	8¼	8	7½	5½	5½	6
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¼	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8½	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10½	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5½	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10½	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10	10	10	10	10	10	8½	7½	7½	7½
Leicester	10½	10	10½	10½	10	10	9	7½	7½	7½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10	10	10	10½	9½	10	9	7½	7½	8
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9	9	9	9	9	9	8	6½	6½	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7½
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9½	9¼	9½	8	9¼	8½	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9½	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10½	9½	10	10	9	7½	7½	7½
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	10½	10	10	10½	9½	10	9½	6	6½	7½
Stockton-on-Tees	10	10½	10½	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7½	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6½	6½	6½
Warrington	8¾	10½	10½	10½	8½	10½	9½	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The masons' rate given is for bankers; fixers usually ½d. per hour extra.

and pipes; the bathrooms, lavatories, and water closets have "Marmette" dadoes and floors of "Flintine" tiles; the stair steps and landings are of Yorkshire stone from Messrs. John F. Shackleton & Son, of Goole; internal partitions of Hemel Hempstead partition blocks; the upper windows of nurses' home have sashes hung on Hall's pivots. The general contractor was Mr. Alex. Pringle, of Gateshead, and the various subcontractors were:—Slating, Messrs. Beck & Son, Newcastle; plumbing, Messrs. Allinson & Son, Gateshead; plastering, Mr. W. Ryan, Gateshead; painting, Messrs. Merrillees & Denton, Gateshead; heating engineers, the R. J. Ward Company, Newcastle; radiators and boilers, the National Radiator Company, Ltd., Hull; wood block floors, Messrs. E. Burgess & Co., Liverpool, and Turpins Floor Company, London; sanitary fittings, Messrs. Doulton & Co., Ltd., Paisley; fires and mantles, Messrs. Doulton & Co., Ltd., Lambeth; Messrs. Emley & Sons, Ltd., Newcastle, and Messrs. Henry Walker & Son, Ltd., Newcastle; iron balusters and railings, Messrs. M. Aynsley & Sons, Ltd., Newcastle; locks and hardware, Messrs. N. F. Ramsey & Co., Newcastle; asphalt paths and roads, Mr. W. T. Wallace, Newcastle; mosaic dadoes, the Art Pavements and Decorations, Ltd., London; electric light, telephones, and telltales, Messrs. Robson & Coleman, Newcastle; boot lockers and racks, the Crittall Manufacturing Company, Braintree; fire hydrants, Messrs. J. Blakeborough & Sons, Brighouse; verandahs covering, Messrs. Pilkington's wired cast plate glass. The buildings were designed and the erection superintended by Mr. John W. Dyson, architect, Newcastle, with Mr. George Cousins as clerk of works. The whole Asylum has been taken over by the Military, and is now the Northumberland War Hospital.

TRADE NEWS.

St. Mary's Church, Berwick-on-Tweed, is being ventilated by means of Shorland's patent exhaust roof ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester. The East Cramlington P.M. Church and Schools, Northumberland, are being supplied with the firm's patent exhaust roof ventilators.

Messrs. Pilkington & Co., Polonceau and Seyssel Asphaltes, Deptford Wharf, 190 and 192, Creek-road, Deptford, S.E., have taken new offices at 17-18, Railway-approach, London Bridge, S.E., and they will be glad if all communications are sent to that address after the 18th inst.

We are informed that the lining of a 40,000 gallon reservoir in Bristol has been made perfectly watertight by the use of the waterproofed cement rendering Pudlo.

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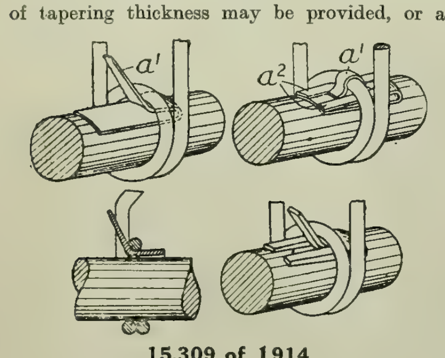
SELECTED PATENTS.

15,309 of 1914.—British Reinforced Concrete Engineering Company and Amos George Bullivant: Reinforced concrete.

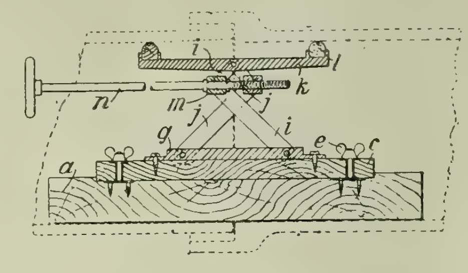
This relates to reinforced concrete in which stirrups or shear members are secured to the main bars by means of cotters passed between the bar and the loop of the stirrup and bent to prevent accidental withdrawal. The cotters may be formed by doubling a strip of metal; the tapered end a^1 is bent up after the cotter is driven in, but the central tongue a^1 or the two side tongues a^2 are bent up before being driven in and then bent down. A small cotter of tapering thickness may be provided, or a cotter of uniform thickness but tapering in width, the narrow end being bent up and the broad end curved transversely so that the edges bear on the bar.



15,309 of 1914.

15,332 of 1914.—Henry George Nicholson-Lailey: Pipe aligning instruments.

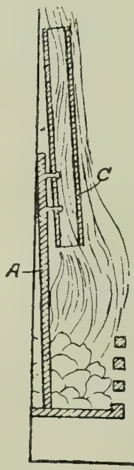
This relates to a device for aligning pipes comprising a base *a* adapted to extend across the joint, and a member *k* capable of slight rocking movement and adapted to be moved away from the base to bear against the upper inner surfaces of the pipes, so that true invert is secured and inequalities of the pipes are brought to the upper side. The member *k*, provided with projecting blocks I, is carried by two sets of toggle-levers *i*, *j* pivoted to a bar *g* secured to a plate *c*. This plate is detachably secured by wing-nuts *e* to a base *a* suited to the size of pipe, the under surface of the base being curved to fit approximately the inner surfaces of the pipes. The levers *i*, *j* are operated to produce relative movement of the parts *a*, *k* by a rod *n* passing through bushes *m*, one of which is threaded to work along a corresponding thread on the rod.



15,332 of 1914.

15,855 of 1914.—Alice Mary Chambers: Fireplaces.

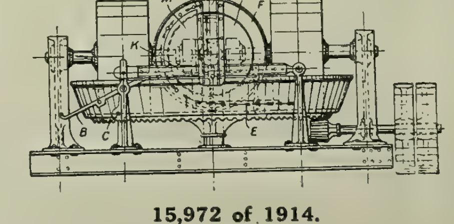
This relates to a device to prevent down-draught in open fireplaces, comprising a short length of metal piping C supported above the fire so as to be heated thereby. It may be attached to a prop A or to the back-plate of the fireplace, or otherwise supported, and may be formed with keyhole slots to take over fixed studs.



15,855 of 1914.

15,972 of 1914.—Edouard Van Montgau: Delivery devices for mortar mills.

This relates to delivery devices for mortar mills or mixing-machines operated by the rotation of the pan. Over the pan are mounted a rotary disc A with an annular channel F and a fixed plate M carrying blades E, H. The blade E directs the material into the channel F, which raises it to the blade H, by which it is directed to a shoot. The device is mounted on a pivoted frame K so that it can be lowered on to the pan, when the disc A is rotated by the motion thereof, or raised to put it out of action. The frame K can be held in its raised position by means of a lever B and pin C.



15,972 of 1914.

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OBITUARY.

Lieut.-Colonel Greenwood.

The late Lieut.-Colonel Joseph F. Greenwood, of Bartram's Park, Hampstead, who died on December 27 at the Horse Guards, was an architect and a Fellow of the Surveyors' Institution. In April, 1907, he was appointed a Superintending Inspector of Works R.E. Staff, and in last August was gazetted honorary lieut.-colonel. In spite of increasing ill-health he remained at his post to the last. His eldest son, Lieut. J. F. B. Greenwood, 1st Royal Lancashire Regiment, fell at St. Julien, near Ypres, on May 3 last.

Lieut. E. K. Smith.

The death, on December 22 in Flanders, is announced of Second-Lieut. Ernest Kennedy Smith, aged twenty-three years, of the 1st East Kent Regiment, to which he was gazetted in last July. He was the eldest son of Mr. W. Macdonald Smith, of Onslow-gardens, Muswell Hill, and was educated at Dover College and Highgate School. He was a promising architect, and achieved high distinction in the Association Schools. He enlisted in September, 1914, and joined the Artists' Rifles.

Mr. W. J. Saville.

We regret to announce the death, which took place at Rugby a few days ago, at the age of fifty-six years, of Mr. Walter John Saville, who for many years had been associated with the firm of Messrs. Foster & Dicksee, builders and contractors. Mr. Saville was the Rugby manager and was also on the board of directors. He was a well-known surveyor. Until recently he was chairman of the Rugby Master Builders' Association and also chairman of the Rugby Benefit Building Society.

Mr. A. Hughes.

The death, on December 22, at his residence, East Side House, Kew Green, is announced of Mr. Arthur Hughes, aged eighty-three years, the last of the Pre-Raphaelite painters. In 1896 he entered the School of Design, in Somerset House, where his first master was Alfred Stevens, and a year later was admitted to the Royal Academy Schools. At the age of seventeen he sent his first picture, "Musidora," to the Royal Academy rooms, and three years afterwards his "Ophelia" was exhibited there, together with Holman Hunt's "Hireling Shepherd" and Millais' "Huguenot" and "Ophelia." His "Ophelia" was bought, upon Rossetti's instigation, by McCracken, of Belfast; for Mr. Plint he painted the "Nativity" (in the R.A., 1858), "Annunciation," and "Long Engagement"—which three pictures now belong to the Birmingham Corporation. With Rossetti, Morris, and Burne-Jones he shared in the decoration of the Union Society's rooms, Oxford, for which he painted, in tempera, the "Passing of Arthur" and the "Return of the Sword 'Excalibur' into the Lake"; in the Ashmolean Museum is his "Home from the Sea." Mr. Hughes was a constant contributor to the exhibition of the Royal Academy and the Grosvenor and New Galleries during a period of thirty years—to the first-named he sent, in 1856, a triptych, "The Eve of St. Agnes," as inspired by the poem of Keats; and shortly afterwards his "April Love," now in the Tate Gallery, Millbank. He illustrated the works of Christina Rossetti, the poems of William Allingham and George MacDonald, and Hughes's "Tom Brown's School Days." He received a Civil List pension three years ago. In 1855 he married Miss Tryphena Foord; his two sons and a nephew, Mr. E. R. Hughes, are artists.

Apotheosis of Marcus Aurelius: Relief from Ephesus.

APOTHEOSIS AND AFTER LIFE.*

ROMAN art has come to its own at last; but it may safely be said that until now its connection with Roman religious beliefs, though foreshadowed by Della Seta, has never yet been exhaustively examined. Mrs. Strong, in her introductory address, criticises those students who would see in Roman art a mere local development under Oriental influences, by showing in the first place that from the time of Augustus Rome's position as a centre of artistic activity ranks her with Alexandria, Antioch, and Seleucia; in the next place that, as recent excavations show, Rome, long before the days of Augustus, was in possession of a vivid and distinctively national art, derived, it is true, from Ionia, but vigorous and independent nevertheless. Mrs. Strong protests in eloquent words against the folly of treating the Roman achievement as a foil to the Greek, and shows how both are but part of a great single movement, the antique. Greek art came to Rome not to die but to live, and to inspire the local Ionicised art with new life; and, with regard to the specific contribution of Rome to the antique, no conception of art which produced architecture of the highest order—the Pantheon, the Pont du Gard, the Baths of Caracalla and Diocletian—can be dismissed as second-rate or imitative. We may pride ourselves on the fact that England more than any other country has found inspiration for her own best work of the domestic and civic order in the study of Roman art. It was not for nothing that Chambers and the Brothers Adam worked in Italy, nor was there any antithesis felt between the work of Stewart and Revett on Athens and that of Adam on Diocletian's palace at Spalato. That great conception of the antique caused union among scholars, not division, until the fuller revelation of Greece caused Roman art to be looked on in the light of her worst features—those decorative copies of older works which have caused both Greece and Rome to become a weariness of the flesh to those who were taught to see in them the culmination and not the pale shadow of ancient art.

The unique position of the emperor restored to Roman art what had been lost in the greatest days of Greece—the importance of the central figure as a motive in art and architecture. The emperors, who had once modestly deprecated divine honours, accept the symbols of the gods from their own hands (Plate X.), or are borne to heaven in the chariot of the sun, the sun himself acting as groom holding the horses' heads (Plate XI), until it is no surprise to find them standing like gods, holding a figure of Victory, the old attribute of Zeus, like Honorius (Plate XII., Fig. 1), or seated, a visible deity under the arcuated pediment of a temple, the central figure to which all men's eyes must turn, the supplanter of the old cultus statues of the gods which once looked out upon the worshipper to command his homage as directly as the Christ in Glory over the portal of Chartres (Plate IV.), or the Beau Dieu de Reims in the days before the war. This centralising influence, this emphasis on a principal figure, was essential if the narrative art of the Greeks as we know it upon friezes and pediments without number was to gain new meaning, to be restored to unity of design, to appeal to the worshipper instead of to the artist or spectator; and in this way the imperial figure in art prepares the way for that of Christ. If such a design as

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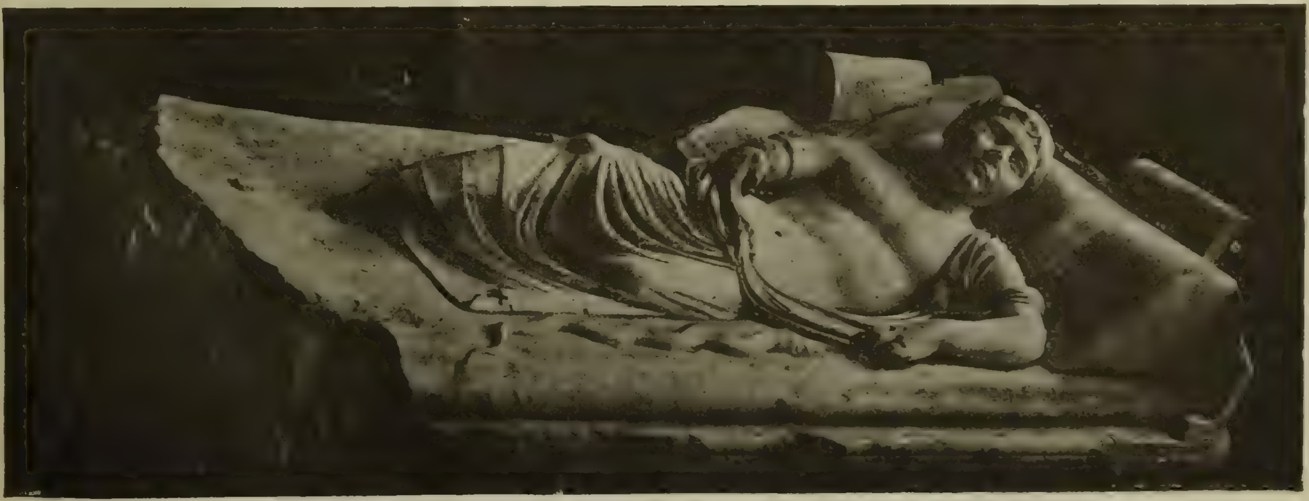
* "Apotheosis and After Life: Three Lectures on Certain Phases of Art and Religion in the Roman Empire." By Mrs. Arthur Strong, LL.D., Litt.D. (Constable & Co. 1915. 8s. 6d. net.)



Tomb of a Dead Boy, perhaps Prince of the Julio-Claudian House, Rome: Museo delle Terme.

The Emperor Valentinian : Silver Disc at Geneva.

is shown (Plate XIII., 2) were set before us without a legend most of us would see in it rather a figure of the risen Lord than a portrait of a Roman emperor of the West, and it is much to have so exquisite a work of art, a work which enlarges our conception of the antique, made for the first time really accessible. This image of Valentinian, "the vivid embodiment of the new centralised authority," set off by the attendant soldiers, whose only part is the service of their lord, suggests a vision of the risen Christ coming to the judgment with His saints behind him, gazing each towards his Lord, yet facing towards the world they come to judge; this is great art, one may say great religious art, and, like the Christian schemes of Raphael and Tintoretto, it depends for its significance upon that marshalling of figures in attendance upon a central figure which Mrs. Strong takes as the supreme contribution of Roman artists to the world.

The second and third lectures deal with the beliefs in an after life as we find them in art from the chariot of Monteleone and the sarcophagus of Haghia Triada down to the monuments of the second and third centuries A.D. The author shows that symbolism dominates these beliefs from the earliest times, that the chariot of the soul, the myths of Dionysiac joys, the need to guard the living from the haunting of the dead, all are but an expression of those beliefs whose influence was to dominate Ionian Greece and Classical Rome to a degree little realised by the ordinary student. Evil influences must be warded from the soul; therefore lions and cocks and other apotropaic objects must be placed upon their tombs. But equally the tomb is essential to the living; the dead must have a home, or his spirit would wander to the torment of the living, without its chance of translation to the higher sphere. Perhaps the noblest form of tomb the world has seen is the recumbent figure of the dead; this is found in Greek lands to an extent not often suspected, though the most familiar ancient examples—and, it may be added, not as a rule among the best—are the Etruscan. The exquisite recumbent figure on Plate XXII. (see page 35), representing some young Julian or Claudian prince, which we reproduce, gives us perhaps the finest Roman example of the kind. The boy lies as if asleep, with only the egg of immortality in the left hand and the crested snake at his side to mark that he has passed into the other world. As a poetical representation of sleep his figure, only found in 1909, has few superiors in art, and if it wants the stark and noble lines of the recumbent dead in mediæval art, it has a wonderful and appealing beauty. By some mistake Mrs. Strong has attributed to this, the eldest of the three great examples of the recumbent child, the poppies of immortality which belong to his youngest brother in the Capitoline Museum, in place of the crested snake which links this Roman monument with one of the oldest Hellenic objects with which she deals, the Chrysapha relief of the heroised ancestors. Underworld beliefs die hard, and their symbolism passes into other religions, sometimes with changed meanings—the form persists if the spirit changes. The book before us indeed furnishes us with another instance of the same process, the Greek myth of Heracles being received into heaven, which appears, charged with new meaning, on the monument of a family of merchants at Igel, near Trèves, whose symbolism Mrs. Strong is at pains to expound. In this new reading of the story the hero, type of the labouring human soul, is caught up in the chariot of Apotheosis, like Cæsar on the altar in the Capitol (Plate VII.), and borne into heaven to the presence of the goddess whom he served. So Greece and Rome meet and fulfil each other, and to deprecate the one because it does not stand where its predecessor stood is to ignore the progress of the human spirit and to be false to the spirit of Greece herself, ever seeking to know and to hear some new thing.

[⁂ The illustrations accompanying this review are taken from the book, and have been lent by the publishers, Messrs. Constable & Co.—Ed.]

PORTLAND CEMENT.

At a meeting of the Institution of Municipal Engineers recently Mr. Horace Boot, M.I.Mech.E., M.Inst.E.E., read a paper on "The Manufacture of Portland Cement," in the course of which he said :—

"Portland cement was probably first manufactured by Joseph Aspden in the eighteenth century; but that was a very different article to what Portland cement which will pass the standard specification is to-day. For it was not until some years later that there was any necessity for a proper uniform mixing of the ingredients, or a mixture that will not vary more than 1 per cent. in the whole year; nor was it considered necessary to grind to such fineness, or burn the slurry so thoroughly as is done to-day. Chemists have made a special study of this, and in all first-class cement the proportion of chalk or limestone to the silica, alumina, and ferric oxide must never vary more than 1 per cent. The constituents of cement, as is no doubt well known by all of you, consist of chalk or sometimes a hard limestone and clay or marl, depending a good deal upon the district from which the raw materials come.

The chief centres of the cement industry are the Thames, Medway, Cambridgeshire, Hull, and generally the North-East of England.

Portland cement was so called on account of its similarity to Portland stone when it is set, but it must not be confused with common lime, which is simply burnt limestone, and possesses no hydraulic properties; nor is it the same as hydraulic lime, which is made out of a slightly burnt mixture of limestone and clay, and has hydraulic properties. Great care has to be taken that the mixture of chalk or limestone with clay or shale is definitely and correctly proportioned. The product is ground very fine and burned at a very high temperature into the form of clinker, the temperature in rotary kilns being as much as 2,500 deg. Fahr. to 3,000 deg. Fahr. This clinker is then ground to powder, and it is usual to specify a fineness of 8 to 10 per cent. residue on a 180 by 180 sieve.

In cement making there are several important factors to be considered, such as the obtaining of the raw materials—that is, chalk or limestone, clay or shale. One, if not both, of the principal ingredients should be adjoining the site of the works, for cement is a cheap commodity and will not permit (if any profit is to be made on the mill) of expensive carriage on the raw materials. Hence the reason why the site of most cement mills is chosen where either or both of the necessary ingredients are present. Again, in the manufacture of cement large quantities of water and coal are required, as well as a suitable means of getting the manufactured product away, by shipment or rail.

It is thus evident that the site of a cement works should be very carefully chosen, that the soil should be carefully tested before finally determining the position. Again, the levels have to be considered to avoid having to haul the clay and chalk uphill, thus adding to the expense of manufacture. Facilities should be present for shipping or railing the cement, and it must be remembered that where large quantities have to be dealt with, such as 3,000 tons of cement per week, a single line of rails would become easily blocked, so that provision should be made for a double line connected to the main line of one of our railway company's systems, or a waterway, if shipment is desired.

If the site is anywhere near a town due regard should be given to the question of nuisance, for it is very difficult to keep the cement works clean, and sometimes the surrounding property might be depreciated for this reason on account of the cement dust.

There are in cement-making what may be called two processes :—

1. The dry process.
2. The wet process.

In the dry process, assuming the raw materials are limestone and clay, they would have to pass through the jaw-crusher machine, and the drying drums, the grinding plant, consisting of ball and tube mills, or combination tube mills, and then be conveyed to the mixing and storage silos, after which it would be burnt in the kilns. From the kilns it goes through the same grinding process as it does in the wet process.

In the wet process the treatment, assuming the raw materials are chalk and clay or marl, consists of passing the raw material through the rolls, from the rolls it drops into the wash mills, from the wash mills, where water is added, it is passed to the wet tube mills for finer grinding; from the wet tube mills it is stored in the slurry mixers and storage tanks. From these tanks it is pumped by the slurry pumps to the kilns. The clinker from the kilns is cooled by passing through a large cooler like a small kiln, and from there is taken by conveyers into the dry grinding mill, where it passes through ball and tube mills, and finally, after it has been ground to extreme fineness, sufficient to comply with the British Standard Specification, the cement is taken to the silos or storage bins, and when cool is ready for use.

When the raw materials are limestone and clay they pass through the jaw crushers, from there to the wet ball and tube mill, or combination wet mill, where water is added; from there to the slurry mixers and storage tanks, and the mixture is pumped by the slurry pumps to the kilns. The dry grinding plant is the same for each method."

The lecturer then dealt with the different types of grinding mills and kilns. As regards the latter, he said :—

"The cement industry has been entirely revolutionised by the use of the rotary kiln, for, after a description of same, it will at once be seen that the labour employed is reduced to a minimum, that a much more uniform and even burning of the cement is possible, with the result that, for ferro-concrete work, rotary-kiln cement is nearly always specified, and will command a higher price than the other kind burned in brick kilns.

The kiln is made up of boiler plates, and consists of a tube, varying in diameter; for an output of 1,000 tons per week it is usually about 9 ft. 6 in. diameter in the burning zone, and often weighs more than 300 tons. It is rotated on rollers, and is driven through gearing at a very slow speed. The fuel is blown in, in the form of powdered coal, and ignited on reaching the burning zone, which attains a temperature of 2,500 deg. Fahr. to 3,000 deg. Fahr. The hot gases travel through the kiln, which is placed at a slight angle above the horizontal, with the cool end at the highest, and on thus to the chimney.

In the cool or chimney end the slurry which is taken from the slurry mixers or storage tanks is pumped in and finally reaches the burning zone, and the clinker produced drops into the cooler, which is like a small kiln, and also revolving. Cold air is drawn in through this cooler to cool the clinker, which clinker takes the shape of round hard pebbles. An immense amount of time, labour, and thought has been spent on the designing of these kilns, for it is no easy engineering matter when one remembers the enormous weight to be revolved, the expansion and contraction that takes place on a length of 200 ft. or more. There are now several firms in this country who can build most excellent kilns, and there is no need to place orders for these kilns abroad. The hard burnt clinker, on leaving the cooler, is then taken to a clinker storage or to bins, and then to the dry grinding mill. With the rotary kiln it is possible to run a cement works, having an output of 2,000 to 3,000 tons per week, with a staff of only thirty men per shift; whereas for the same output with the 'Chamber brick kilns' this number of men would have been necessary for working the kilns only."

The lecturer dealt with the question of fuel and coal-grinding plant, and then went on to say :—

"After leaving the grinding mill the clinker which is now ground is conveyed and elevated into silos for storage. The silo buildings will have several bins with a total capacity of three to four weeks' output of finished cement, which will enable any purchaser, when carrying out an important contract, to have his own bin and draw from it as he desires, so that he can be assured of the uniform quality of the cement. For ferro-concrete work this is important, as you are all aware.

The why and wherefore of the greater use of reinforced concrete construction is not difficult to find. Those engineers who have had the designing of large structures to carry heavy machinery, such as is met with in industrial mills or for the building of large storage kilos or bins, will fully appreciate these remarks, because with a reinforced-concrete construction it is a simple matter to demonstrate in figures the strength of such buildings and allow a proper margin or factor of safety; whereas with brickwork such a calculation is very difficult and certainly unreliable, for nobody can accurately say what is the adhesion of brickwork and what factor of safety has been allowed.

Recently my firm has had to design some large silos, capable of holding 10,000 tons of cement, and it is surprising with brickwork how uncertain one is when finished as to the final strength. But if such silos are built with einforced concrete one can be certain of the actor of safety.

There are several methods of building the silos, but the best one, I think, is to design it of ferro-concrete. The emptying of cement silos is not such a simple problem as it appears for cement arches when packed closely. An ingenious method to use is the vacuum process, in which a cement bag is put into a small chamber and the bag fixed on to a pipe connecting it with the silo. A vacuum is then produced in this chamber, causing the cement immediately to rush from the silo through the pipe into the bag and fill it. As soon as the bag (which is automatically weighed) is filled to the correct weight, the vacuum is cut off and the door of the chamber opens to allow the man to remove the sack. The cement in the bag is then ready for rail or shipment. A large loading platform with ample floor space is required, with railway lines running alongside it, so that the bags of cement can be loaded into trucks."

THE FUTURE OF OUR ENGINEERING INDUSTRIES.

IN the shadow of war and the stress of endeavouring to cope with the ever-growing demands—always more and more surprising in their ramifications—of the great colossus it is perhaps natural that reflections as to the industrial position of our nation at the termination of hostilities should not flow easily, for it is indeed a noisy and boisterous atmosphere in which to attempt mature deliberations. None the less it is true that if these reflections are delayed until peace comes into her own it will be too late to take advantage of many of the lessons which the war has taught, and of the changed situation which must be contemplated. When we hear of business men in Germany meeting nearly a year ago to discuss the problems and prepare for the modifications which this upheaval has produced we may well reflect upon the necessity for organisation, and feel that, whatever the outcome of the struggle, power of co-ordinating the interrelations of industry, which has meant so much to Germany, will be in no wise a dead thing in that country, and if broken will recover.

Had Britain possessed the appreciation for scientific arrangement and scientific principles enjoyed by our enemies, it is hardly too much to say that the war would have been over by now, and there is little doubt that the splendid individual characteristics possessed by our nation are very largely thrown away through the misdirection or lack of proper direction of its efforts. And it is probable that no one who has worked for any public service, whether in an official or private capacity, during the present crisis will feel inclined to dispute this view. The men are there, the means and the energy and capacity are there, but that great essential, the scheme which shall ensure that everyone is in his right place and working with and for his fellows on a preconceived and studied plan, is wanting. It may be said that the circumstances of this crisis are so exceptional that it was not to be expected that any pre-existing plans could meet the emergency.

Suppose, for example, that the whole of the engineering industries had before the war been co-ordinate for industrial purposes, by which is not meant linked up as a ring fence for the purposes of maintaining wage standards or profits, but so systematized that the parts common to all or to each group of such industries had been working together on a plan for general advancement. Had these great branches of our national prosperity possessed a "head" which was directing the hundred "arms" and the arms the "fingers" representing the specialised trades, how many mistakes, delays, overlappings, and financial wastages would have been prevented in summoning the united efforts of the hundred workers who are called upon in modern warfare to be the orderlies of a single private in the firing trench! Suppose that these industries, by what would have been a trivial individual contribution, had for their common benefit arranged, for example, in previous years to conduct a series of researches into the microstructure of metals, a subject (like many others which do not show a weekly return of profit) left almost entirely to the private efforts of a few professional individuals, what might have been the result at the present time? Had an alloy suitable for heavy ordnance even slightly superior to that in ordinary use been discovered, the effect upon the tide of war might well have been far-reaching enough not only to repay the outlay a thousandfold, but to earn for ever the gratitude of the nation.

What is wanted is an Intelligence Department, with a permanent committee sitting, not to hamper every trading firm with cast-iron regulations, but to act as a centre for the consideration of all matters affecting generally engineering interests. This department, which would be controlled by a committee representing the foremost experts in the trades, would be responsible for a great clearing house of information dealing with trade development, and a research factory devoted solely to experiments, not merely as conducted in the laboratory of the scientist, but with the addition of trials on a commercial scale. The Intelligence Department would develop the kind of work recently initiated by the Board of Trade for industries generally, and its duties would consist not only of digesting trade statistics and consular reports for the benefit of special branches of engineering, but of preparing pamphlets showing the progress of the applications of research in other countries. It would also act as a centre for the exchange of information on all relevant matters between the industries concerned.

The Research Department would conduct experiments in pure science with a view to advancing knowledge of the properties of the various materials used, and would probably concentrate its attention initially on ascertaining the relation of physical properties to chemical composition in the new fields of alloys of iron. In close touch with the scientists conducting these researches would be others less highly trained in laboratory research, but with a thorough appreciation of manufacturing conditions and requirements, who would conduct experiments in the research factory and lead to commercial value of the work in the laboratory.

The objection may be raised that each firm has its own methods and secrets, and if it makes discoveries prefers to benefit by them individually; but if this war has taught anything, it is surely that the power of efficient action united is the only thing which can bring safety and prosperity, and what is gained by the watertight compartment system is far more than lost by the lack of what may be called side-issue knowledge, for it is well established that the more any branch of industry advances the greater is the necessity for keeping in touch with other branches, which to the casual observer may appear to have but little connection with it.

If such a scheme as has been outlined possesses any merits, now is the occasion, not perhaps to introduce it into being, but to prepare for its introduction, and this for two reasons. Firstly, there has never been a time when the engineering industries have been brought into such close contact. Munition Committees control every machine tool in the country, statistics are available which have never previously existed, and there is a spirit of appreciation for science and organisation—albeit, born of necessity, not of education—which has never been known before in this country. Secondly, science has received an official recognition, for which it has been waiting since the days of the Prince Consort, in the formation of a Government Committee for Industrial Research. This is a strong Committee, composed of eminent statesmen, assisted by scientific and practical experts of recognised standing. Its labours are about to begin, and it is for industry to see that this great opportunity is not frittered down to the confines of mere academic work, as has been too often the result of lesser schemes. It is not suggested that it is the function of the Committee on Industrial Research to initiate such a scheme for the engineering interests, but were it put forward by the industries there is little doubt that most valuable co-operation might be obtained from this Committee, whose sympathies would be obviously inclined to any movement which would help to marshal the forces of mechanism.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, lii; Auction Sales, lviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

January 10. — **Newry.** — Cottage.—For the erection of a gatekeeper's cottage at Greenfields Crossing, between Newry and Goragh Wood, for the Directors of the Great Northern Railway Company. Drawings, etc., may be inspected at the Engineer's offices at Dublin and Belfast.

January 12.—**Rathdown.**—Slating, etc.—For keeping in order, for one, two, or three years, as may be decided, the slating, gutters, down-pipes, and chimneys, of all the Workhouse buildings, including out-offices, for the B.G. Specification by Mr. P. H. McCarthy, B.E. Forms of tender of Mr. Patrick Cunniam, Clerk of the Union, Clerk's Office, Loughlinstown.

January 13.—**Manchester.**—Glazing.—For the glazing of a roof in the Smithfield Market for the Markets Committee. Specifications, etc., of Mr. R. Lawton, Works Manager, Coop-street Workshop, Smithfield Market, Manchester.

January 19.—**Romsey.**—Demolition of Buildings and Erection of Cottages.—Pulling down of some existing buildings in Romsey and for the erection of three cottages on the site for the Corporation. Plans and specification of the Borough Surveyor, Market-place, Romsey.

January 24.—**Irlam.**—Artisans' Dwellings.—The U.D.C. invite tenders for the building of seventy-eight houses on three sites, as follows:—Thirty houses on site No. 1, twenty-eight on site No. 2, and eighteen on site No. 3. The conditions of contract, etc., may be inspected and copies of the bills of quantities, etc., obtained on application to Mr. Roland H. Winterbottom, Surveyor, Council Offices, Irlam, on payment of £5.

February 7.—**Lancashire and Yorkshire Railway.** — Painting. — The Directors invite tenders for painting at various places. Forms of tender, etc., may be obtained on personal application at the Engineer's Office, Hunt's Bank, Manchester.

February 9.— **Lancashire.** — Painting.— For painting at various places for the Directors of the Lancashire and Yorkshire Railway. Forms of tender, etc., on personal application at the Engineer's Office, Hunt's Bank, Manchester.

No Date.— **Kenmare.** — Rectory.—For the erection of a rectory, for the Rev. R. P. Rowan, Kenmare. Mr. G. A. E. Hickson, architect, 23, Denny-street, Tralee. Deposit, £1 1s.

No Date. — **Rosyth.** — Houses.—Contractors prepared to tender for a minimum of twenty-five houses (all trades) are invited to send their names to the Scottish National Housing Company, Ltd., 111, George-street, Edinburgh.

FURNITURE, MATERIALS, etc.

. January 8.—**Bourne.**—Granite, etc.—Supply to the R.D.C. of about 6,000 tons of granite and 2,000 tons of slag. Tender forms of Mr. Thomas Lake, District Surveyor, Bourne.

January 12.—**Dublin.**—Builders' Materials.—Supply to the Dublin Port and Docks Board of builders' materials for twelve months, ending on January 31, 1917. Mr. N. Proud, Secretary, Port and Docks Office, Westmoreland-street, Dublin.

January 14.—**Irlam.**—Broken Granite, etc.—Supply to the U.D.C. of the following materials required during the year ending March 31, 1917:—Broken granite, tarred slag, kerbs, setts and paviors' chippings, granite concrete flags, cement, stoneware pipes, iron castings. Forms of tender of Mr. R. H. Winterbottom, Surveyor, Council Offices, Irlam.

* January 20.—**Lambeth.**—Materials and Services.—The Lambeth B.C. invite tenders for the supply of materials and for rendering certain services during 1916.

March 8.—**Aberaman.**—Paints, etc.—Supply to the directors of the Powell Duffryn Steam Coal Company, Ltd., from April 1, 1916, of paints, etc. Forms of tender, etc., of the Stores Manager, Aberaman Offices, near Aberdare.

ENGINEERING, IRON, AND STEEL.

January 10.—**Motherwell.**—Footbridge.—Providing and erection of a footbridge over the railway at Motherwell, for the Directors of the Caledonian Railway Company. Drawings, specification, and schedule at the office of the Company's Engineer, Buchanan-street Station, Glasgow. Deposit, £2 2s.

* January 10.—**St. Pancras.**—Extension of Power House.—The St. Pancras B.C. invite tenders for extension of power house.

January 11. — **Reigate.** — Boiler. — For the supply and installation of a new sectional boiler at the Baths, Castlefield-road, Reigate, for the T.C. Specification, etc., and full particulars may be obtained of Mr. Fred T. Clayton, Borough Surveyor, Municipal-buildings, Reigate.

January 13.—**Avonmouth.**—Drain Diversion, North Side, Royal Edward Dock.—Bristol Docks Committee invite tenders for the excavation of a deep trench and the laying of a 12-in. stoneware pipe drain at the Royal Edward Dock, Avonmouth, etc. Copies of the specification can be obtained from Mr. Thomas A. Peace, Engineer, Engineer's Office, Cumberland-road, Bristol, on production of a receipt for deposit of £1 paid to the Secretary of the Docks Committee, 19, Queen-square, Bristol.

No Date.—**Bath.**—Boiler.—For the supply and fixing of a new boiler for the heating apparatus at Kingsmead Council School, for the Education Authority. Specifications, etc., of the Surveyor of Corporate Property, Guildhall, Bath.

ROAD, SANITARY, AND WATER WORKS.

January 8. — **Castlebar.** — Water-main.—For supplying and laying about 550 lineal yds. of 2-in. cast-iron water-main. Specification prepared by Mr. E. K. Dixon, C.E.

January 12.—**Dublin.**—Paving Setts.—Supply to the Dublin Port and Docks Board, for the term of twelve months, ending January 1, 1917, of paving setts. Forms of proposal may be had between the hours of eleven and one o'clock, of Mr. N. Proud, secretary, Port and Docks Office, Westmoreland-street, Dublin.

January 13.—**Bristol.**—Trench and Pipe Drain.—For the excavation of a deep trench and the laying of a 12-in. stoneware pipe drain at the Royal Edward Dock, Avonmouth, for the Docks Committee. Specification, etc., of Mr. Thomas A. Peace, Engineer, Engineer's Office, Cumberland-road, Bristol. Deposit of £1 to the Secretary of the Docks Committee, 19, Queen-square, Bristol.

January 22.—**Norwich.**—Stone, etc.—Supply to the Eastern and Western Highways Committees of the Norfolk C.C. of flints, gravel, chalk, etc., for the year ending March 31, 1917. Specifications, etc., of Mr. W. W. Gladwell, County Surveyor, The Shirehouse, Norwich.

January 24.—**West Suffolk.**—Surface Tarring and Supply of Tar.—(1) Surface tarring of various main roads in the county during 1916; (2) supply of refined tar or other proprietary article, for the surface treatment of roads. Conditions of contract, etc., may be obtained on application to Mr. W. Lionel Jenkins, A.M.Inst.C.E., County Surveyor's Office, Shire Hall, Bury St. Edmunds.

January 29. — **Worcester.** — Granite, etc. — Supply to the Worcestershire C.C. of granite, blast furnace slag, and tar macadam during the year ending March 31, 1917. Forms of tender, etc., of Mr. C. F. Gettings, County Surveyor, 30, Foregate-street, Worcester.

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TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to THE BUILDER LTD., and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

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CAMDEN TOWN AND WEST NORWOOD FIRE-STATIONS.

It has been agreed, on the recommendation of the Brigade Committee of the L.C.C., that tenders be invited from selected firms for the execution of the necessary painting work in connection with (1) the alterations in progress at the Camden Town fire-station, and (2) the erection of a new fire-station at West Norwood.

THE BUILDING TRADE, BRADFORD.

During the past year the building trade in Bradford has been seriously affected by the war. Just in one direction has the war been beneficial. It has led to the erection of a number of new workshops and to many extensions of premises where engineering work is carried on. Similarly there has been a considerable amount of work done in extending the premises of textile manufacturers to enable them to cope with the great rush of the past year for khaki and other cloths. While only one mill has been built, there have been twenty-eight workshops, fifteen warehouses, five weaving sheds, a combing shed, and two spinning sheds erected. It was in the backbone of the building trade—houses and shops—where the weakness manifested itself. A number of contracts of a public character would have been carried out this year had not the Local Government Board put their foot down and declared that the work must be postponed.

[Those with an asterisk (*) are advertised in this issue.]

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.]

Since our last issue Portland cement, metals, slates, lead, glass, and oil prices have been increased.—ED.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
Best Stocks	2	0	0
Picked Stocks for Facings	2	15	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
Flettons	1	16	0	Best Blue Pressed Staffordshire	3	15	0
Best Fareham Red	3	12	0	Do. Bullnose	4	0	0
Best Red Pressed Ruabon Facing	5	0	0	Best Stourbridge Fire Bricks	4	0	0

GLAZED BRICKS—	£	s.	d.		£	s.	d.
Best White, Ivory, and Salt Glazed Stretchers	13	0	0	D'ble Str'tch'rs	18	10	0
				Double Headers	15	10	0
				One Side and two Ends	19	10	0
Headers	12	10	0	Two Sides and one End	20	10	0
Quoins, Bullnose and 4½ in. Flats	16	10	0	Splays and Squints	18	0	0

Second Quality £1 per 1000 less than best.

	s.	d.	
Thames and Pit Sand	8	0	per yard, delivered.
Thames Ballast	6	9	,, ,, ,,

Per ton, delivered.

	£	s.	d.		£	s.	d.
Best Portland Cement	2	5	0	..	2	8	0

Do. £2 1s. alongside in 80-ton lots.

Ferrocrete 2s. 6d. per ton extra on above.

Best Ground Blue Lias Lime .... 1 1 0 .. —

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime .... 17s. 0d. per yard delivered.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1	7
Do. do. delivered in Railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1	8¾
Do. do. delivered on road waggons, Nine Elms Depôt	1	9¼
PORTLAND STONE—		
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, L. & S.W.R., per ft. cube	2	5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½

White Basebed, 2d. per ft. cube extra.

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	11	Red Corsehill in blocks	2	6
Beer in blocks	1	7	Closeburn Red Freestone	2	2
Greenshill in blocks	2	0	Red Mansfield Freestone	2	6
Darley Dale in blocks	2	6			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	2	10
Per Ft. Super., Delivered at Railway Depôt		
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto, ditto	3	2
3 in. sawn two sides slabs (random sizes)	1	0
2 in. to 2½ in. sawn one side slabs (random sizes)	0	8
1½ in. to 2 in. ditto, ditto	0	6½

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	9
6 in. rubbed two sides ditto	3	3
3 in. sawn two sides slabs (random sizes)	1	2½
2 in. self-faced random flags	0	6

TILES.

Per 1000 f.o.r. London.

	£	s.	d.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2	12	6
Ornamental ditto	2	15	0
Hip and valley tiles (per dozen)	0	5	6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£	s.	d.
Best Blue Bangor slates, 20 by 10	11	16	0
First quality ,, ,,	11	10	0
,, ,, 16 by 8	5	15	0
Best Blue Portmadoc, 20 by 10	11	13	6
First quality ,, ,,	11	3	6
,, ,, 16 by 8	5	15	0

WOOD.

BEST BUILDING REDWOOD.

Imported sizes.	£	s.	d.		£	s.	d.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	22	0	0	..	23	0	0
3 in. by 9 in., 2½ in. by 9 in. and 2 in. by 9 in.	21	10	0	..	22	10	0

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

	£	s.	d.		£	s.	d.
Battens: 2 in., 2½ in., and 3 in. by 8 in.	20	0	0	..	20	10	0
2 in., 2½ in., and 3 in. by 7 in.	20	0	0	..	20	10	0
2 in., 2½ in., and 3 in. by 6 in.	19	10	0	..	20	0	0
2 in., 2½ in., and 3 in. by 5 in.	18	10	0	..	19	0	0
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.	19	0	0	..	19	10	0
3 in. by 4 in., and 3 in. by 4½ in.	20	0	0	..	20	10	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0				
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.			
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 7	10	0	..	—		
Seconds do. do.	7	0	0	..	—		
9 in. to 10 in. do.	6	10	0	..	—		
6 in. to 8 in. do.	6	0	0	..	—		

Stocks very limited.

	£	s.	d.		£	s.	d.
Sawn pitch pine logs (about 35 cu. ft. average)	Per load. 8	0	0	..	8	10	0
Do. 6 in. to 10 in.	6	5	0	..	6	10	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	0	0	..	6	10	0
Per standard.							
Best Pitch Pine Deals	34	0	0	..	35	0	0
Rio do.	23	0	0	..	25	0	0
Under 2 in. thick	0	10	0	extra.			
JOINERS' WOOD.							
White Sea First Quality Red:							
4 in. by 11 in.	35	0	0	..	36	0	0
3 in. by 11 in., and 2 in. by 11 in.	34	0	0	..	35	0	0
4 in. by 9 in.	33	0	0	..	34	0	0
3 in. by 9 in., and 2½ in. by 9 in.	32	0	0	..	33	0	0
9 in. by 11 in. boards	1	0	0	more than deals.			
7 in. and 8 in. battens	24	0	0	..	25	0	0
7 in. and 8 in. boards	1	0	0	more than battens.			
Seconds quality	2	0	0	less than best.			
Third quality	£2 to £3			less than seconds.			
Archangel White Deals—							
Best 3 in. by 11 in.	28	0	0	..	29	0	0
3 in. by 9 in. and 10 in.	26	0	0	..	27	0	0
Seconds, do.	1	10	0	less than best.			
U.S. Battens	19	10	0	..	20	0	0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	£	s.	d.		£	s.	d.
1¼ in. by 7 in. planed and shot	Per square actual. 1	4	0	..	1	5	0
1¼ in. by 7 in. planed and matched	1	4	6	..	1	5	0
1 in. by 7 in. planed and shot	0	19	0	..	1	0	0
1 in. by 7 in. planed and matched	0	19	6	..	1	0	6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0	15	0	..	0	16	0
1 in. by 7 in. do.	0	19	6	..	1	0	6
⅝ in. by 7 in. do.	0	12	6	..	0	13	0

6 in. at 6d. per square less than 7 in.

5 in. and 5½ in. at 6d. per square less than 6 in.

White Floorings at 6d. to 1s. per square less than Redwood.

	£	s.	d.		£	s.	d.
Columbian or Oregon Pine, best quality	Per standard. 28	0	0	..	29	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.			
Oddments	39	0	0	,,			
Seconds, regular sizes	43	10	0	,,			
Oddments	37	10	0	,,			
Kauri Pine—Planks per ft. cube	0	7	6	..	—		
Oak Logs—							
Large, per ft. cube	0	6	0	..	0	6	6
Small ,, ,,	0	5	0	..	0	5	6
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super, as inch	0	1	0	..	0	1	3
¾ in. do. do.	0	0	10	..	0	1	0
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0	1	0	..	0	1	4
Selected, Figury, per ft. super, as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	6	..	0	2	6
Dry Walnut, American, per super, as inch	0	1	0	..	0	1	3 upwards.
French, "Italian," Walnut	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	16	15	0	..	17	15	0
Plain Compound Girders, ordinary Sections	18	10	0	..	19	10	0
Plain Compound Stanchions	19	10	0	..	21	0	0
Angles, Tees, and Channels, ordinary sections	17	0	0	..	18	10	0
Flitch Plates	17	0	0	..	17	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	..	14	0	0

(Turning extra.)

METALS (*Continued*).

Per ton, in London.

IRON—	£	s.	d.		£	s.	d.
Common Bars	16	0	0	..	—		
Staffordshire Crown Bars, good merchant quality	16	10	0	..	17	0	0
Staffordshire "Marked Bars"	17	0	0	..	17	10	0
Mild Steel Bars	16	10	0	..	17	0	0
Steel Bars, Ferro-Concrete quality, £17 10s. basis price.							
Hoop Iron, basis price	17	10	0	..	—		
,, ,, Galvanised	28	0	0	..	30	0	0

(*And upwards, according to size and gauge.)

	£	s.	d.		
Sheet Iron Black—					
Ordinary sizes to 20 g.	16	10	0	..	—
,, ,, 24 g.	17	10	0	..	—
,, ,, 26 g.	18	0	0	..	—
Sheet Iron, Galvanised flat, ordinary quality—					
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	25	0	0	..	—
Ordinary sizes to 22 g. and 24 g.	26	0	0	..	—
Ordinary sizes to 26 g.	27	0	0	..	—
Sheet Iron, Galvanised, flat, best quality—					
Ordinary sizes to 20 g.	27	0	0	..	—
,, ,, 22 g. and 24 g.	27	10	0	..	—
Ordinary sizes to 26 g.	28	0	0	..	—
Galvanised Corrugated Sheets—					
Ordinary sizes, 6 ft. to 8 ft. 20 g.	25	0	0	..	—
Ordinary sizes, 22 g. & 24 g.	25	10	0	..	—
Ordinary sizes, 26 g.	26	0	0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19	15	0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20	5	0	..	—
Best Soft Steel Sheets, 26 g.	21	15	0	..	—
Cut Nails, 3 in. to 6 in.	18	0	0	..	—

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

		£	s.	d.		
LEAD—Sheet, English, 4 lb. and up		36	10	0	..	—
Pipe in coils		37	0	0	..	—
Soil pipe		40	0	0	..	—
Compo pipe		40	0	0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.		
COPPER—						
Strong Sheet	per lb.	0	1	5	..	—
Thin ,,	,,	0	1	6	..	—
Copper nails	,,	0	1	5	..	—
Copper wire	,,	0	1	5	..	—
BRASS—						
Strong Sheet	,,	0	1	3	..	—
Thin	,,	0	1	4	..	—
TIN—English Ingots	,,	0	1	10	..	—
SOLDER—Plumbers'	,,	0	0	10	..	—
Tinmen's	,,	0	1	0	..	—
Blowpipe	,,	0	1	2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.
,, fourths	6¼d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4¼d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6¼d.
Rolled Sheet	4d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	9
,, ,, ,, in barrels	,,	0	3	10
,, ,, ,, in drums	,,	0	4	1
Boiled ,, ,, in barrels	,,	0	4	0
,, ,, ,, in drums	,,	0	4	4
Turpentine in barrels	,,	0	4	6
,, in drums	,,	0	4	9
Genuine Ground English White Lead (In not less than 5 cwt. casks.)	per ton	43	15	0
Red Lead, Dry	per ton	42	10	0
Best Linseed Oil Putty	per cwt.	0	10	0
Stockholm Tar	per barrel	1	12	0
GENUINE WHITE LEAD PAINT—"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	54	10	0

VARNISHES, &c.

Per gallon.	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

PATENTS.

APPLICATIONS PUBLISHED.*

19,227 of 1914.—James Thomas Battersby: Coupling for ropes, cords, or the like.

21,672 of 1914.—Moses Kellow: Roof-coverings.

23,000 of 1914.—Henry James Craymer: Hammering apparatus.

23,493 of 1914.—Ernest Joseph Taylor: Supports for raidators for heating buildings and the like.

23,569 of 1914.—Vulcan Foundry, Ltd., and William Collingwood: Tube joints.

23,726 of 1914.—Niels Bendixen and Montague Brown Mountain: Electric fire-alarm apparatus.

3,813 of 1915.—Hugh Donald Fitzpatrick (Marguerite Rutten, Belgium): Water waste preventing apparatus.

4,368 of 1915.—Robert Falkland Carey and Waygood-Otis, Ltd.: Joints or connections for hosepipes and the like.

5,880 of 1915.—Frederick William Blair: Steps or ladders.

7,383 of 1915.—Robert Alexander Rutland: Portable shower baths.

7,415 of 1915.—George Molyneux Park: Apparatus for cooling clinker in the manufacture of cement and for like cooling purposes.

7,430 of 1915.—Thomas Sanders: Casement and like stays and fasteners.

7,803 of 1915.—Joseph Aloysius Frauenheim: Manufacture of bolts.

7,959 of 1915.—James Walter Beckett: Construction of portable huts.

8,442 of 1915.—George Rutter, jun.: Roller blinds, screens, and the like.

8,458 of 1915.—Frederick William Uren and Aubrey Gamble: Means for joining up the ends of electrical conduits.

8,671 of 1915.—George R. Wimberly: Doors.

9,191 of 1915.—William Bacheller Caswell: Window-blind roller brackets.

9,786 of 1915.—Henry James Hubert King: Combined pipe junctions and cocks.

9,806 of 1915.—John Alexander Steven: Electric switches for controlling lift or other motors.

9,818 of 1915.—James Ellis Barraclough: Saddle or protection plates of domestic or like ovens.

9,886 of 1915.—Charles Rees Williams: Reinforced cement pedestal casing for water-closet pans.

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

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RUSSIAN and JAPANESE
PRIME DRY
WAINSCOT **Oak**
SYDNEY PRIDAY,
KING WILLIAM HOUSE, 2a, EASTCHEAP, LONDON, E.C.
Depot: Wainscot Sheds, Millwall, E. *T.N.: Avenue 667.*

NEW COMPANIES.

THE undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.

DAVIES BROTHERS (WALTHAMSTOW), LTD. (142,460), Blackhorse-lane, Walthamstow. Registered December 20. To carry on business of steam joiners, timber merchants, builders, estate developers, and sawmills, now carried on by Davies Brothers at above address. Nominal capital, £15,000 in 15,000 £1 shares.

JOHN LEVICK, LTD. (142,597), 149, Alma-street, Aston, Birmingham. Registered December 22. To acquire and take over business of metallic and railway fittings, electrical, mechanical, and general engineers, brass and iron founders, and metals of all kinds, now carried on by J. Levick at above address, builders, contractors, etc. Nominal capital, £50,000 in 50,000 £1 shares.

A. & B. HANSON, LTD. (142,512). Registered December 23. To carry on business of builders, contractors, decorators, surveyors, land and house and estate agents, sanitary, gas and electrical engineers, coach builders, saddlers, etc. Nominal capital, £5,000 in 5,000 £1 shares.

H. COLEMAN & CO., LTD. (142,517). Registered December 23. To acquire, take over, and carry on business of furnishing and general ironmongers, builders, merchants, water and sanitary engineers, now carried on by W. Coleman at High-street, Harlow, and to carry on business of iron, brass, and other metal workers, dealers in earthenware, etc. Nominal capital, £1,200 in 1,200 £1 shares.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ILFORD.—For the supply of triple concentric electric light cable, for the Urban District Council:—

W. T. Henley's Telegraph Works Co., Ltd., Blomfield-street, E.C.* £2,260 4 6

NORTHAMPTON.—For alterations to and equipment of a room at the Borough Accountant's office, for the Corporation:—

Beardsmore & West‡ £94 16

‡ Recommended for acceptance.

SOUTHAMPTON.—For proposed additional dining-room accommodation, 98, Above Bar-street, Southampton. Mr. William Burrough Hill, architect, Southampton:—

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H. Cawte	1,178
H. Stevens & Co.	1,163
Jenkins & Sons, Southampton†	1,126

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Supplement to "The Builder," January 7, 1916.

"THE BUILDER" CAL

January

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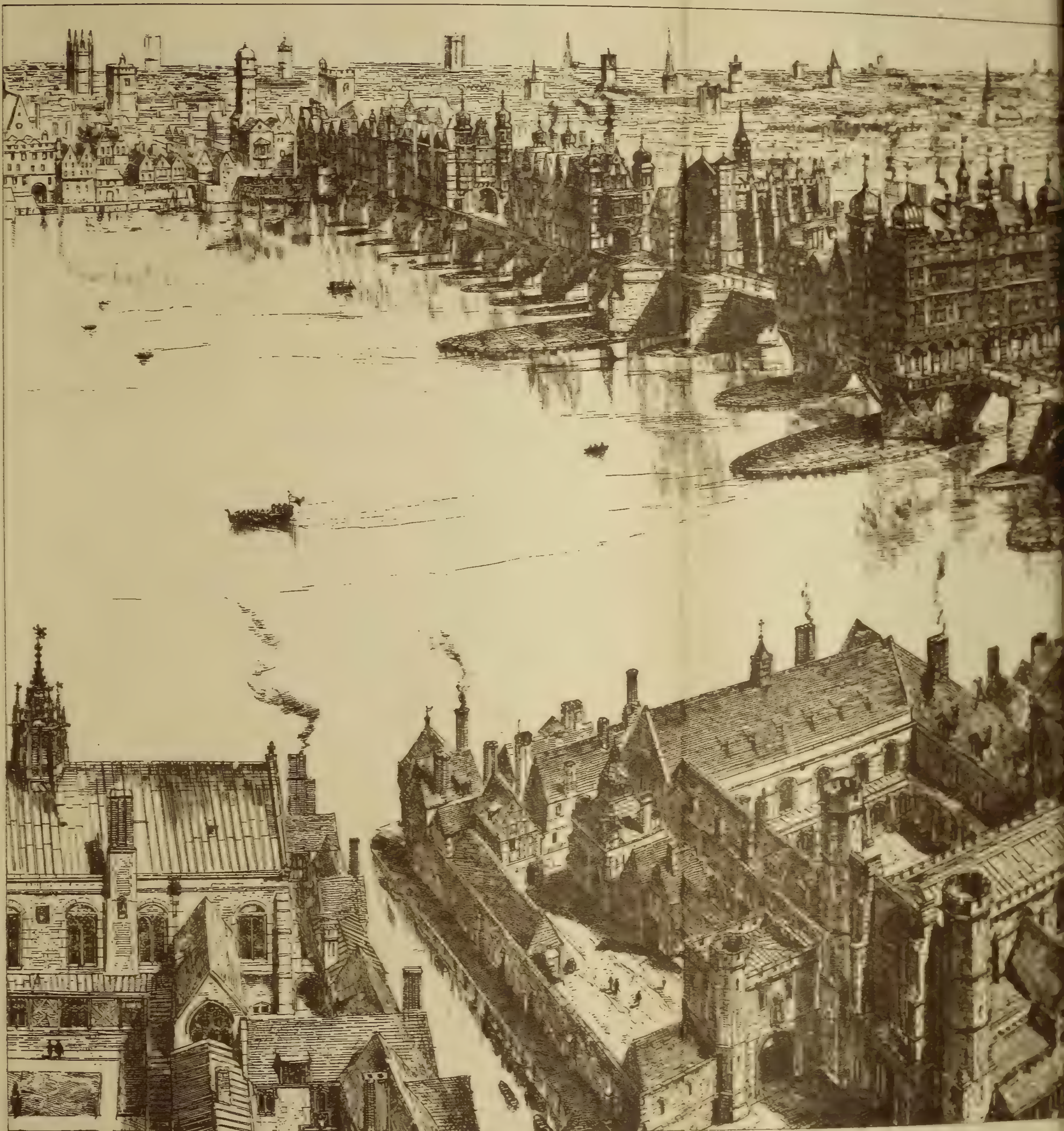
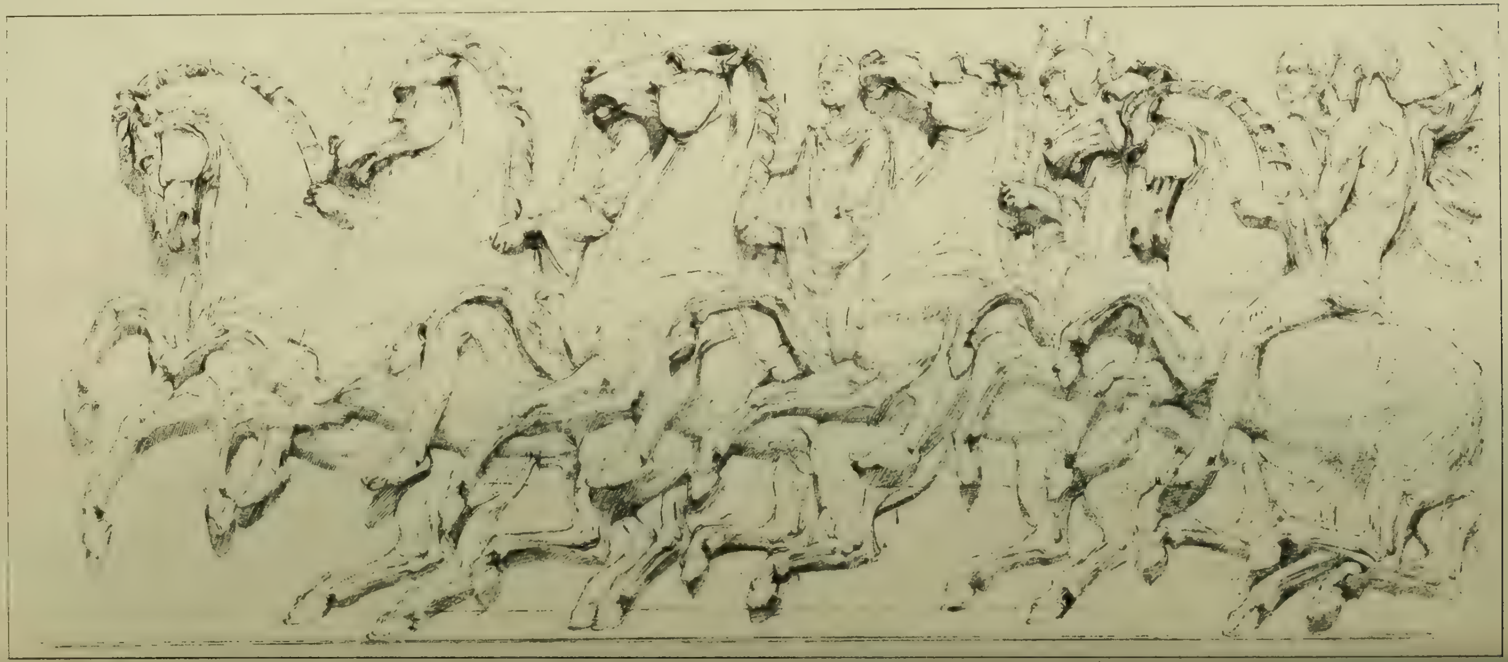


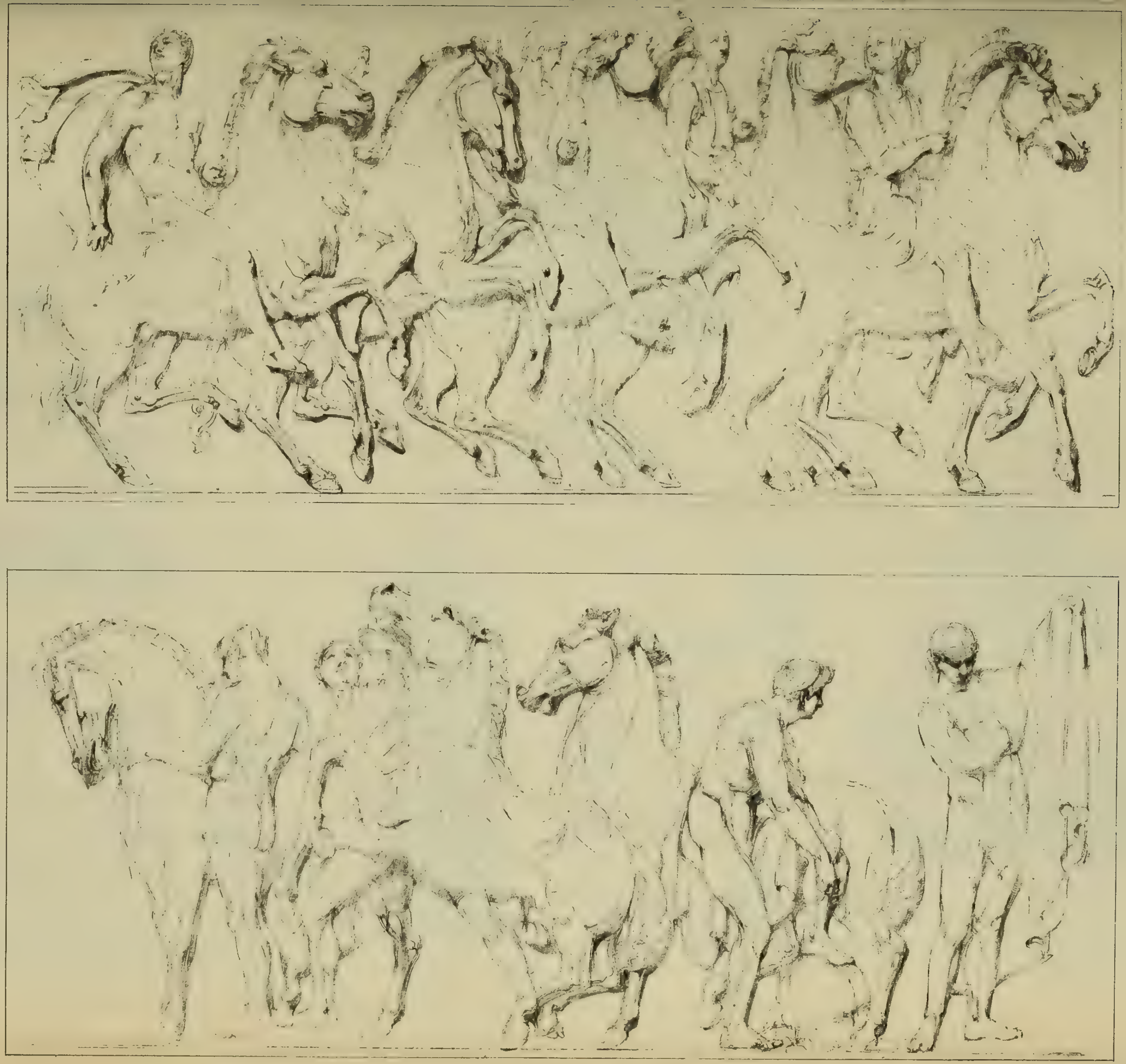
BANK HOLIDAYS.

April 21	Good Friday.
April 24	Easter Monday.
June 12	Whit Monday.
August 7	Monday.
Dec. 25	Christmas (Mon.)
Dec. 26	Tuesday.

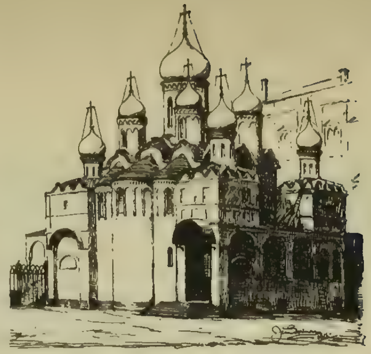
OLD LONDON BRIDGE (FROM THE SU

Old London Bridge was preceded by previous structures of which we know little, but a wooden bridge probably existed as early as the 3rd
designer being a Parish Priest known as Peter of Colechurch, and it was finally completed in 1206. In 1577 the Bridge House betwe
In 1582 a Dutchman built the Waterworks (shown as a building with a tower, close to the northern end of the Bridge). Between 1756-17
to accommodate the growing traffic, and in 1829 the New Bridge was begun and was finished in 1831, the O

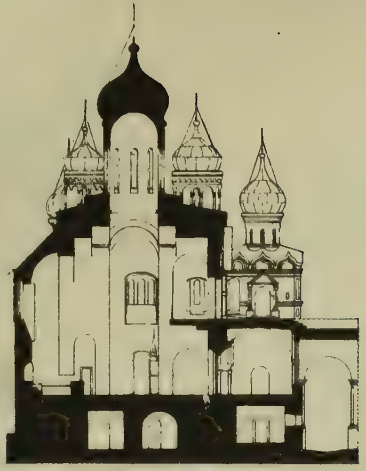




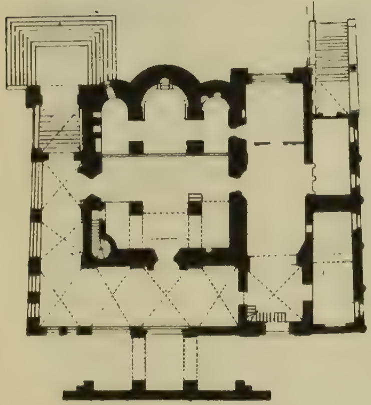
PORTION OF FRIEZE OF THE PARTHENON.—CONJECTURAL RESTORATION, BY MR. ALFRED C. CONRADE.



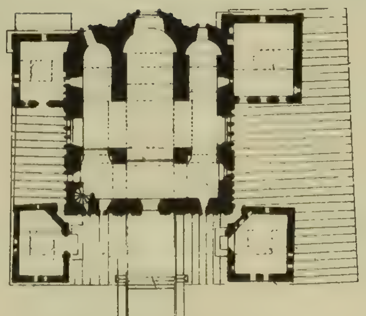
SKETCH OF CHURCH.



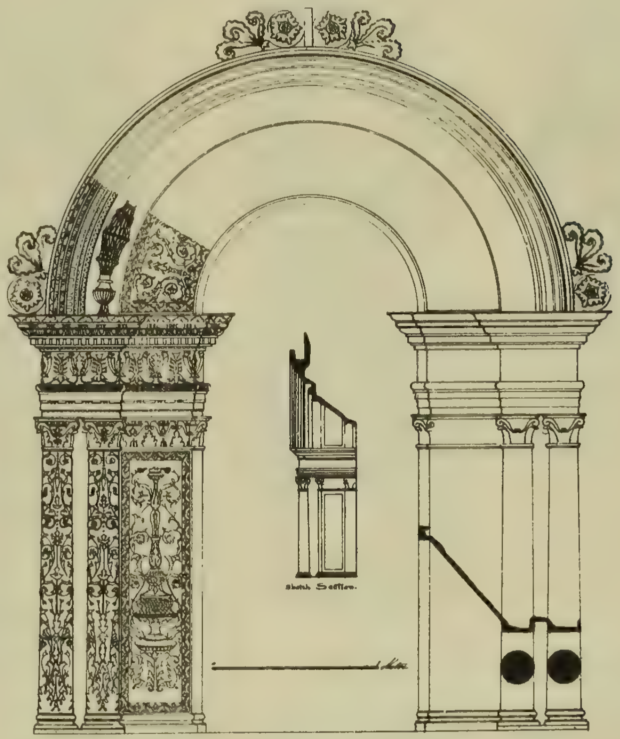
SECTION, FROM EAST TO WEST.



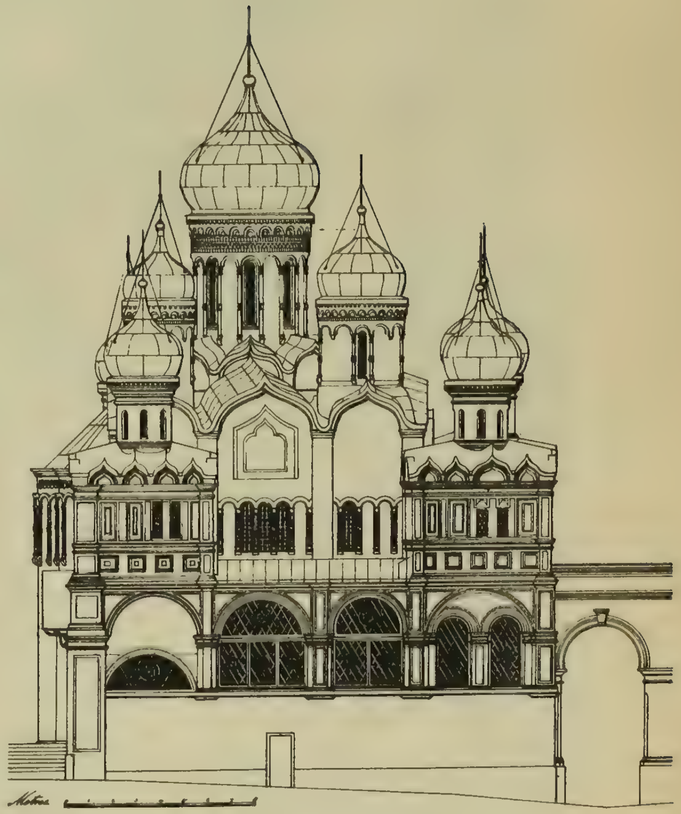
GROUND PLAN.



FIRST FLOOR PLAN.

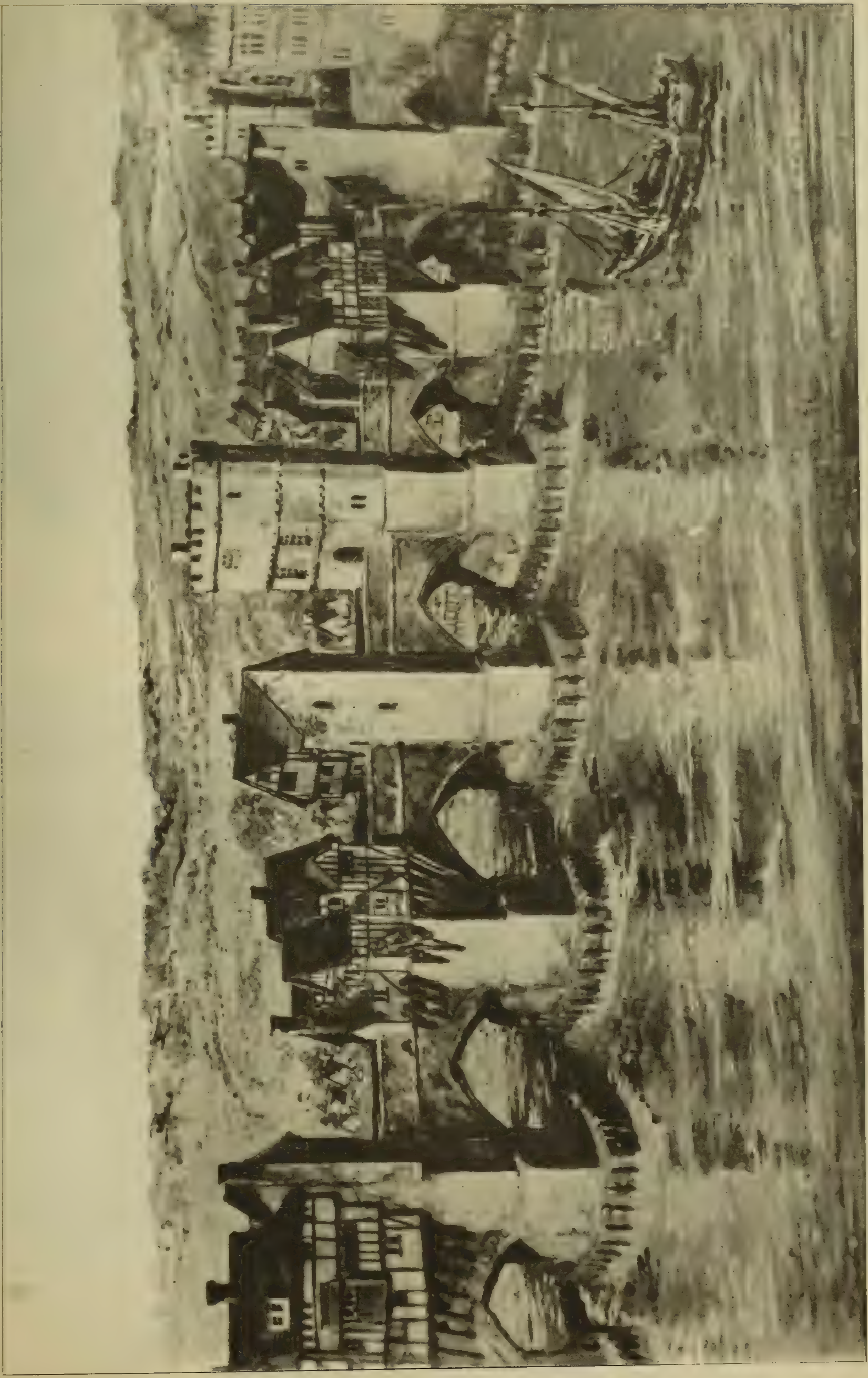


DETAILS OF WEST DOOR TO NAVE.

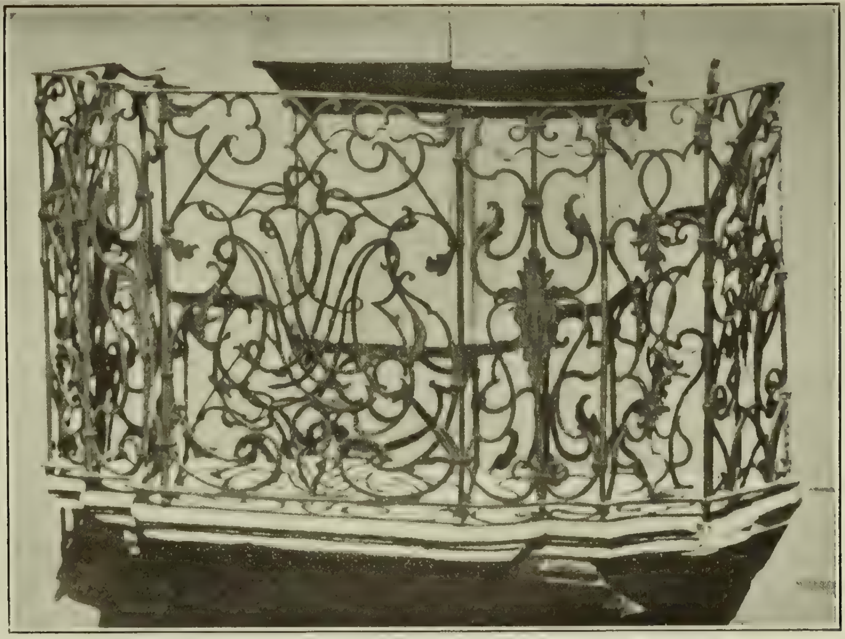


NORTH FACADE.

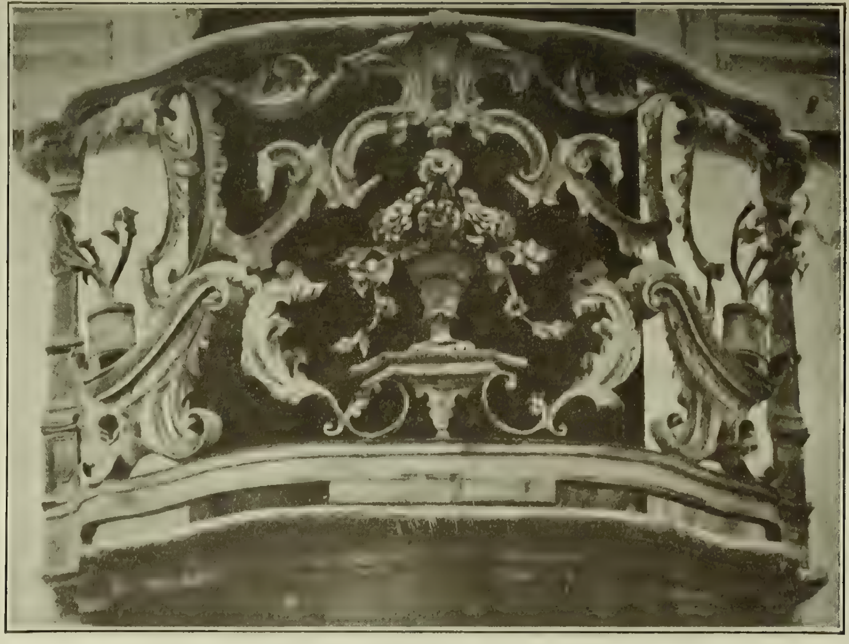
RUSSIAN ARCHITECTURE. CATHEDRAL OF ANNUNCIATION IN THE KREML', MOSCOW.—FROM DRAWINGS BY JEAN GODWIN.



PORTION OF MODEL OF OLD NEWCASTLE.—BY MR JOHN B. THORP.



AN 18TH CENTURY BALCONY, CREMONA.



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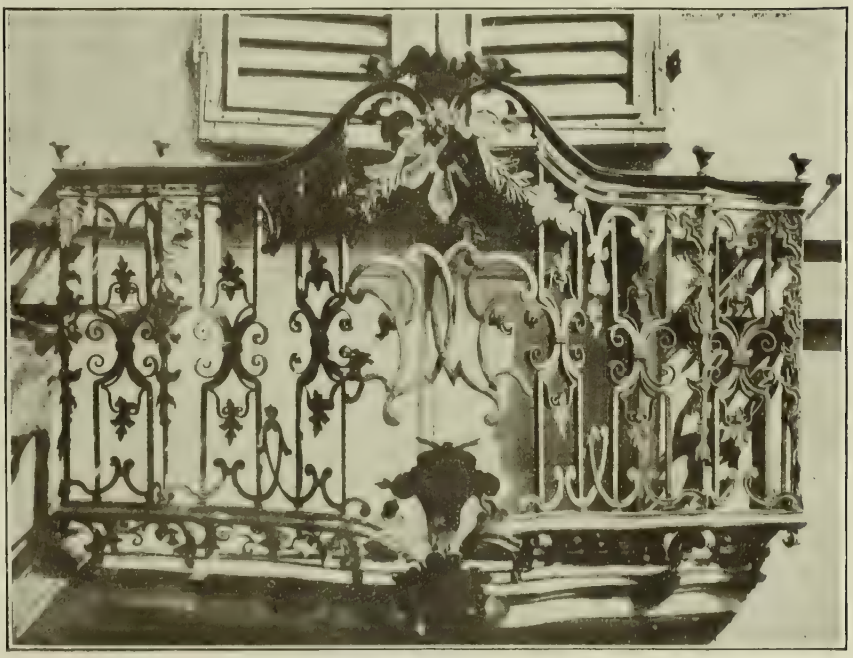

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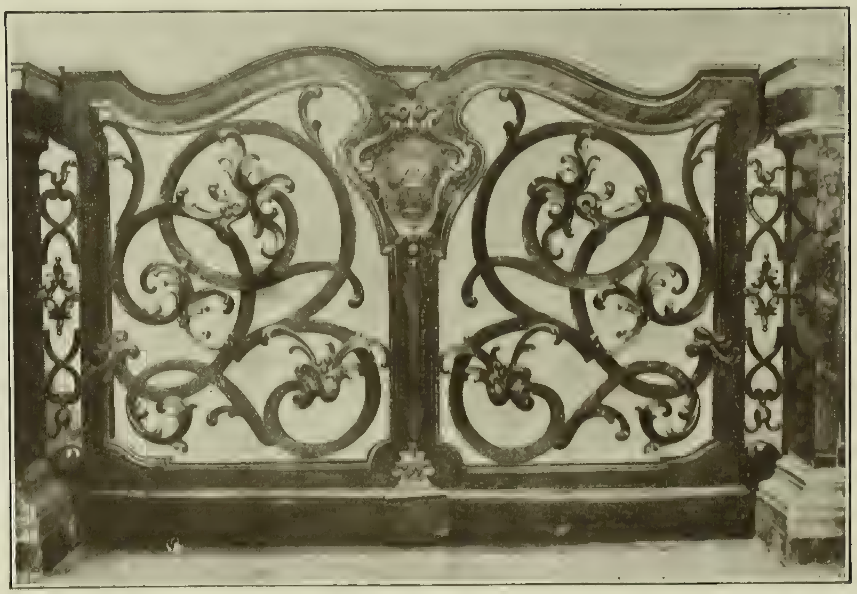
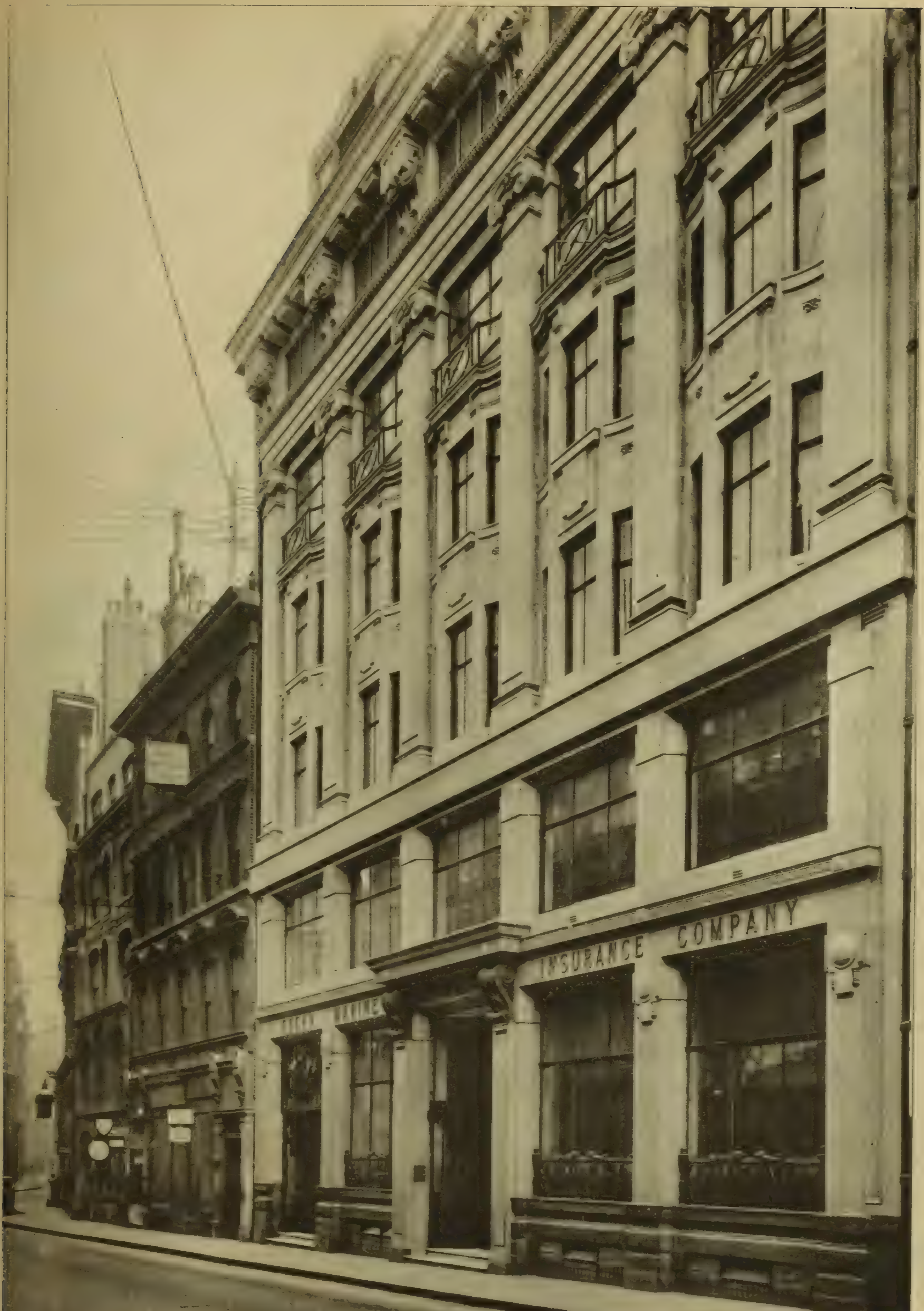


AN 18TH CENTURY BALCONY, BOLOGNA.

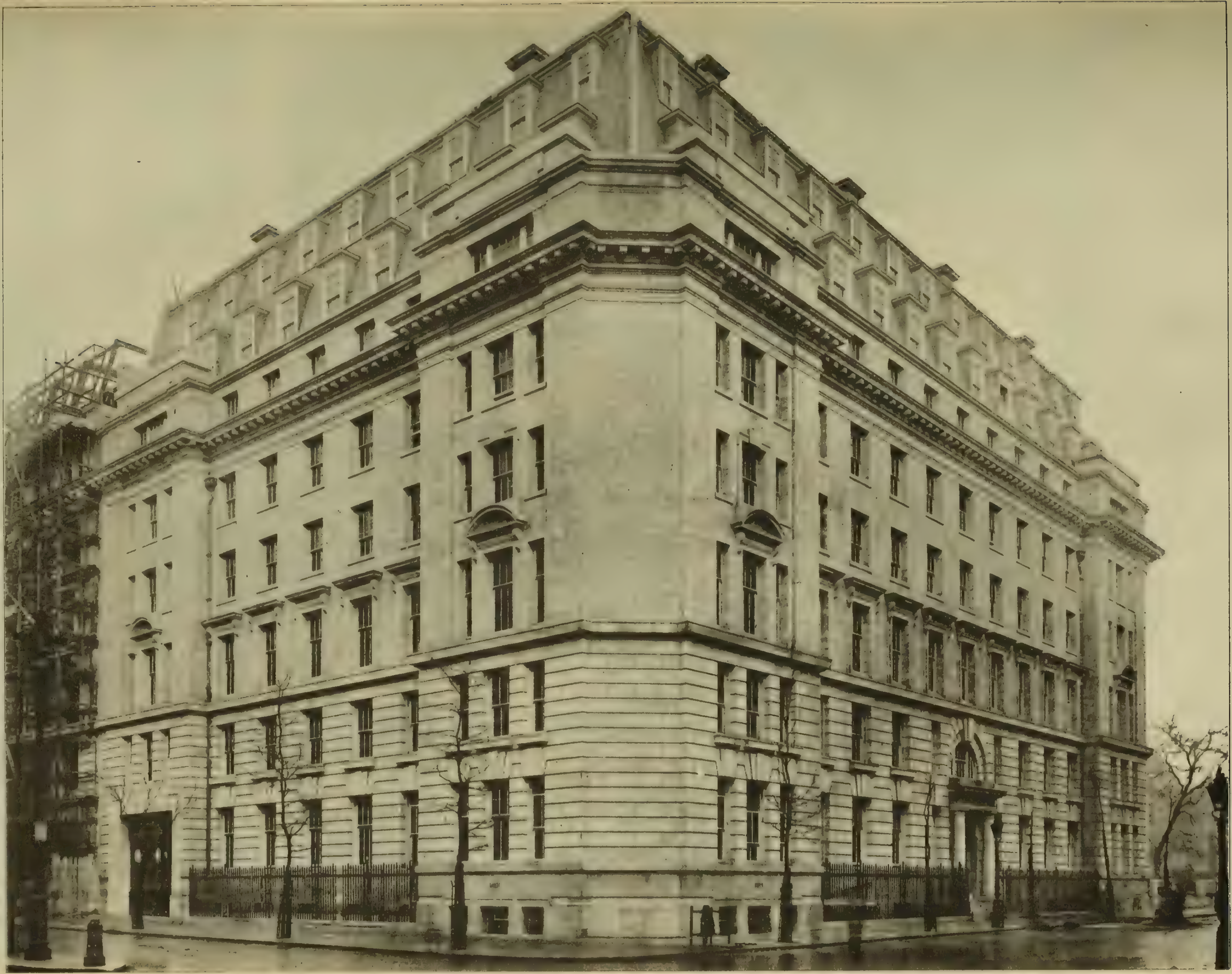
OLD ITALIAN BALCONIES.



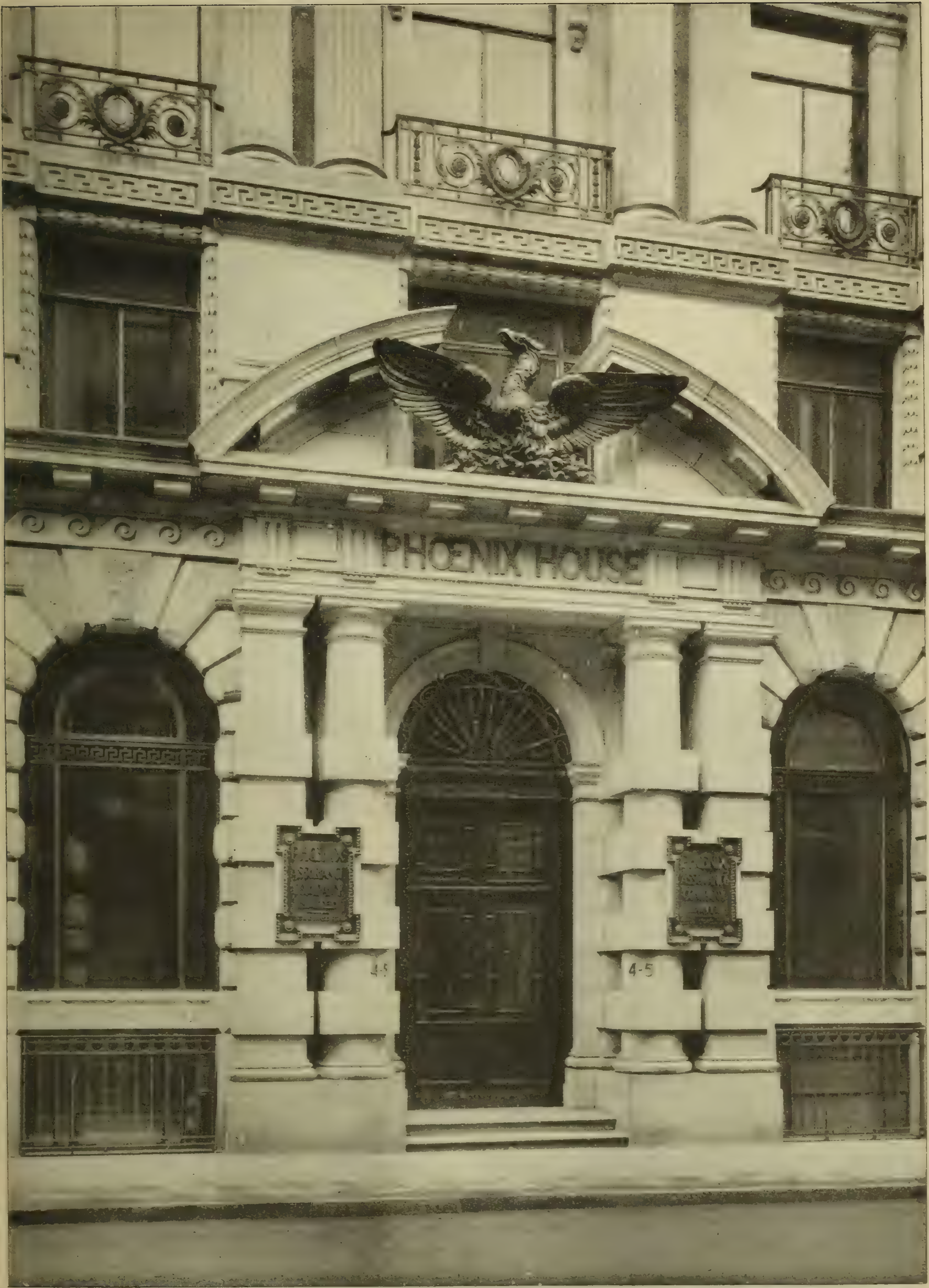
OCEAN MARINE INSURANCE COMPANY'S NEW PREMISES, OLD BROAD STREET, E.C.

MESSRS. THOMPSON & WALFORD, ARCHITECTS.

PHOTO: BEDFORD LEMERE & CO.



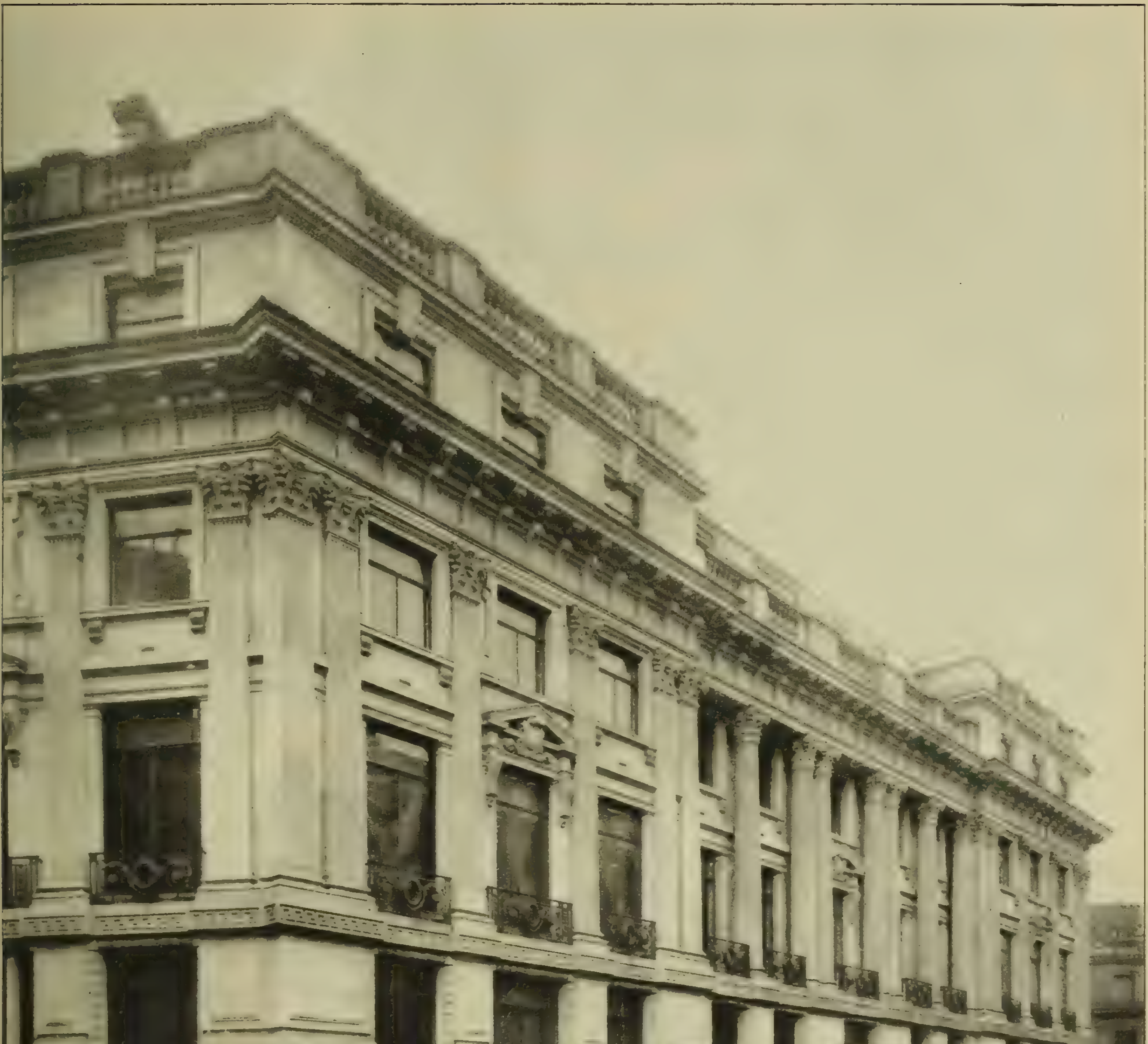
PUBLIC TRUSTEE OFFICES, KINGSWAY, W.C.



PHOENIX ASSURANCE COMPANY'S NEW PREMISES, KING WILLIAM STREET, E.C.: ENTRANCE.

THE LATE J. MACVICAR ANDERSON AND MR. H. L. ANDERSON, ARCHITECTS.

PHOTO: BEDFORD LEMERE & CO.



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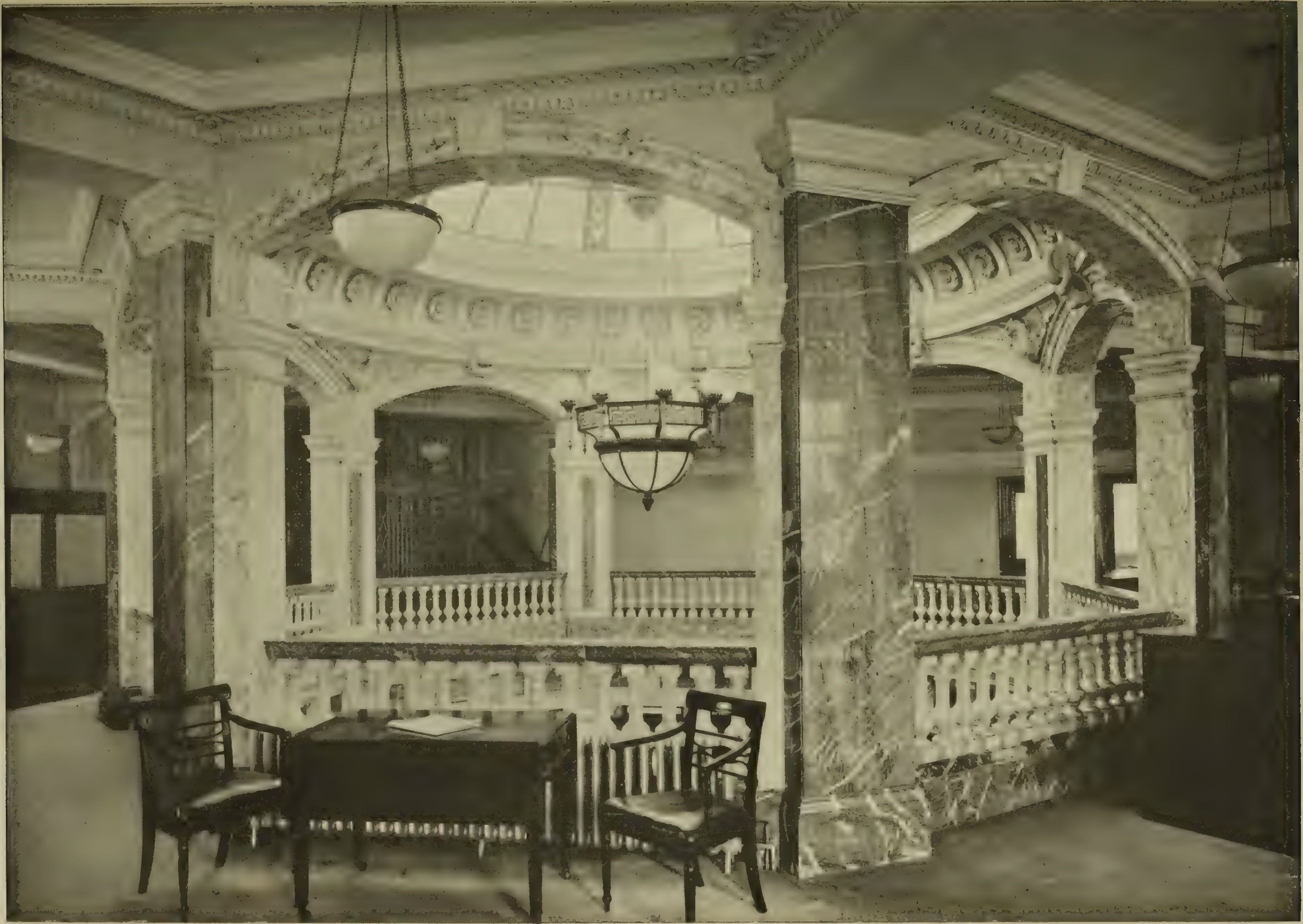

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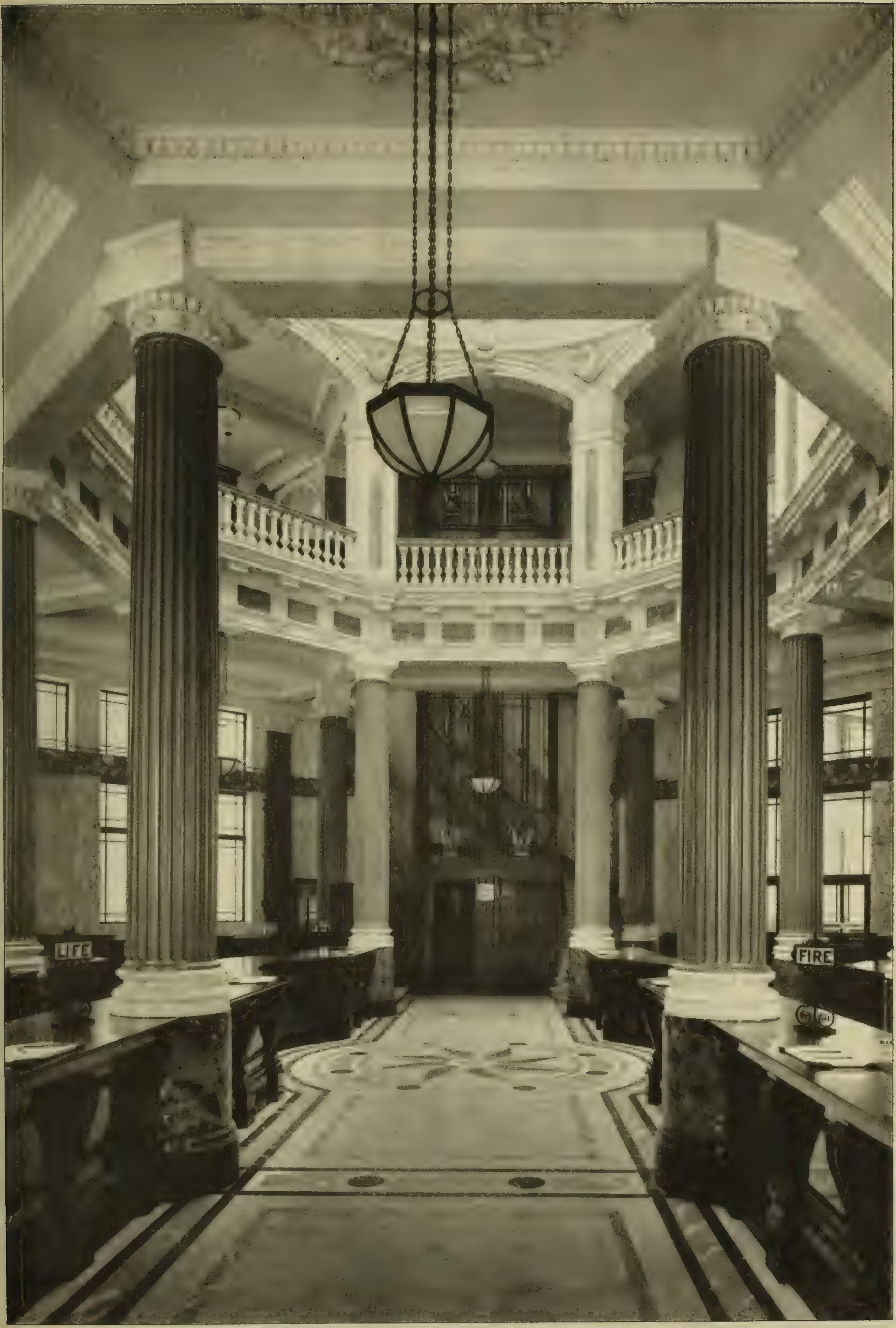

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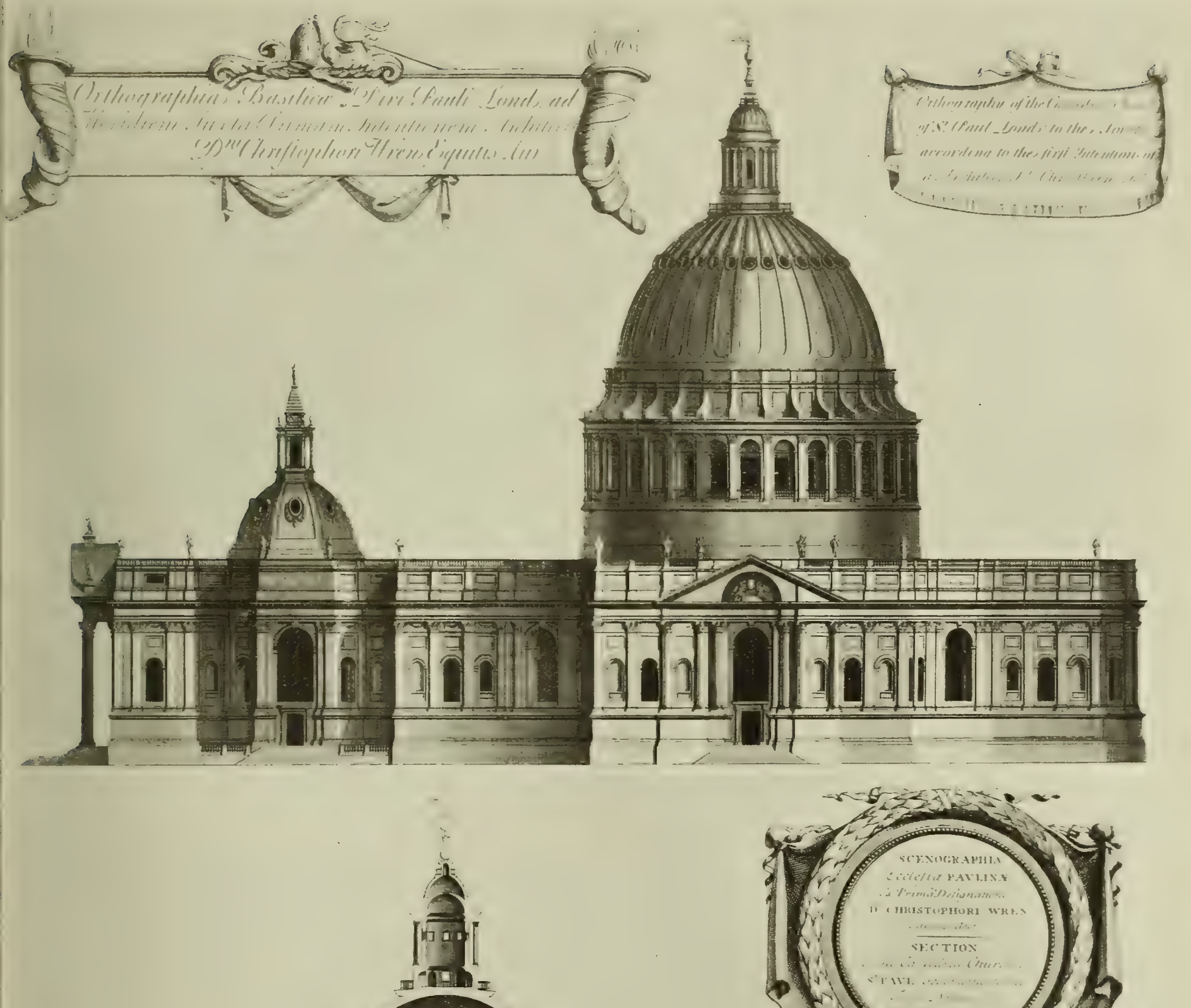
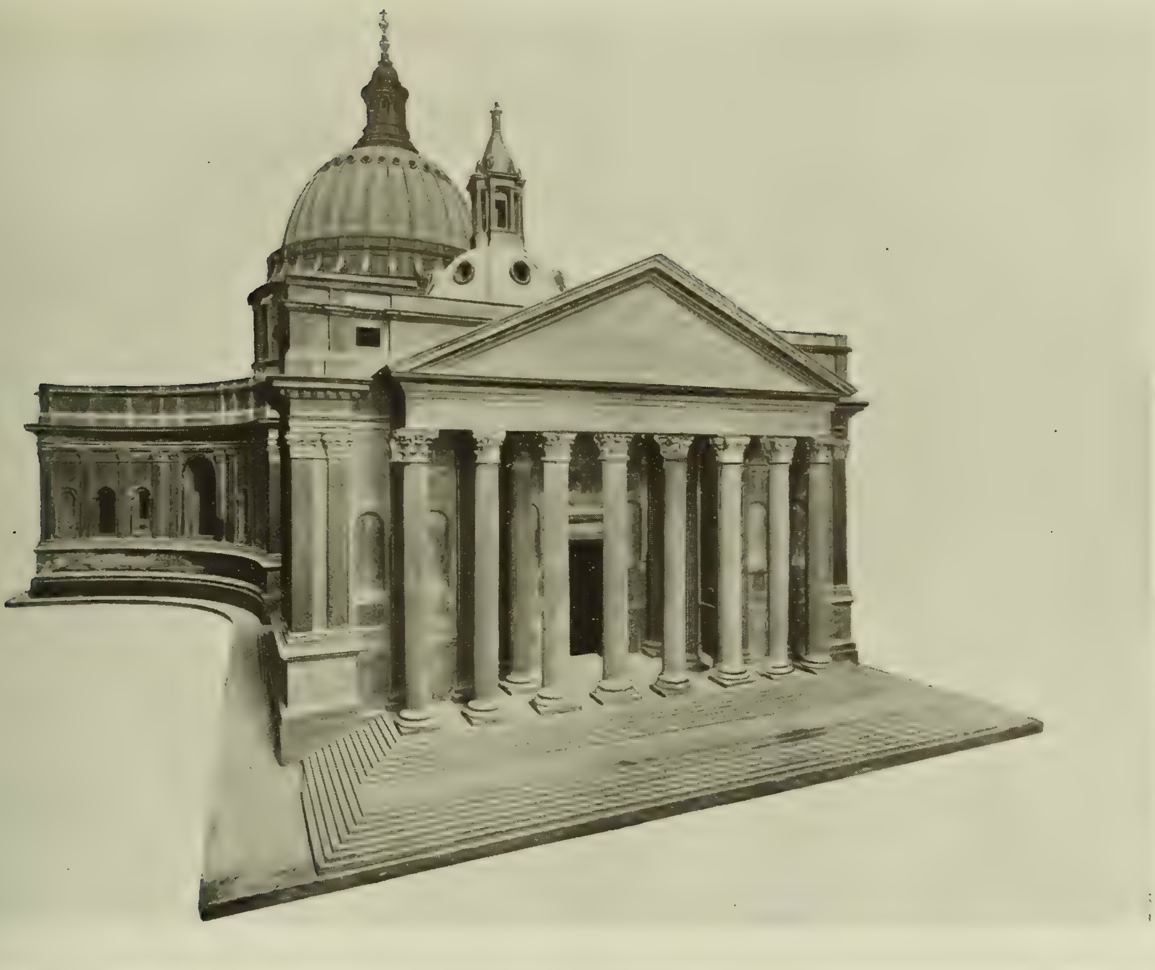
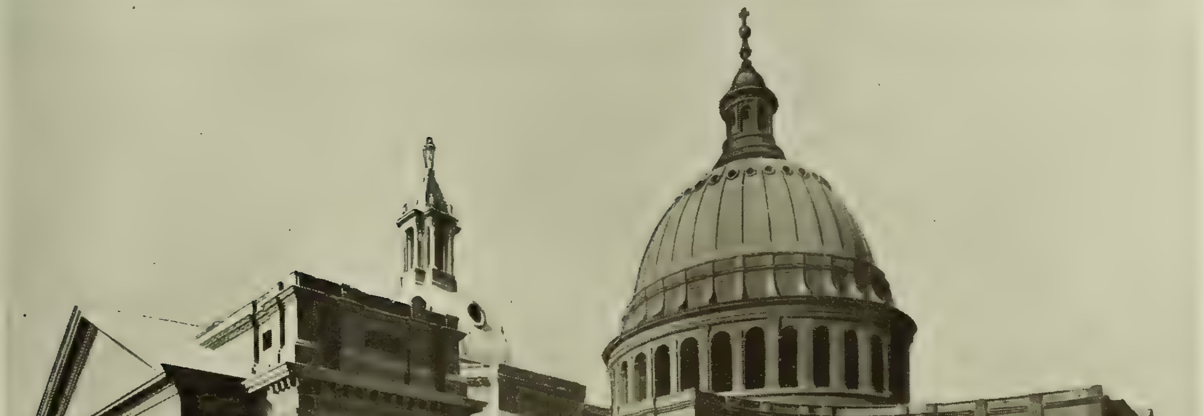


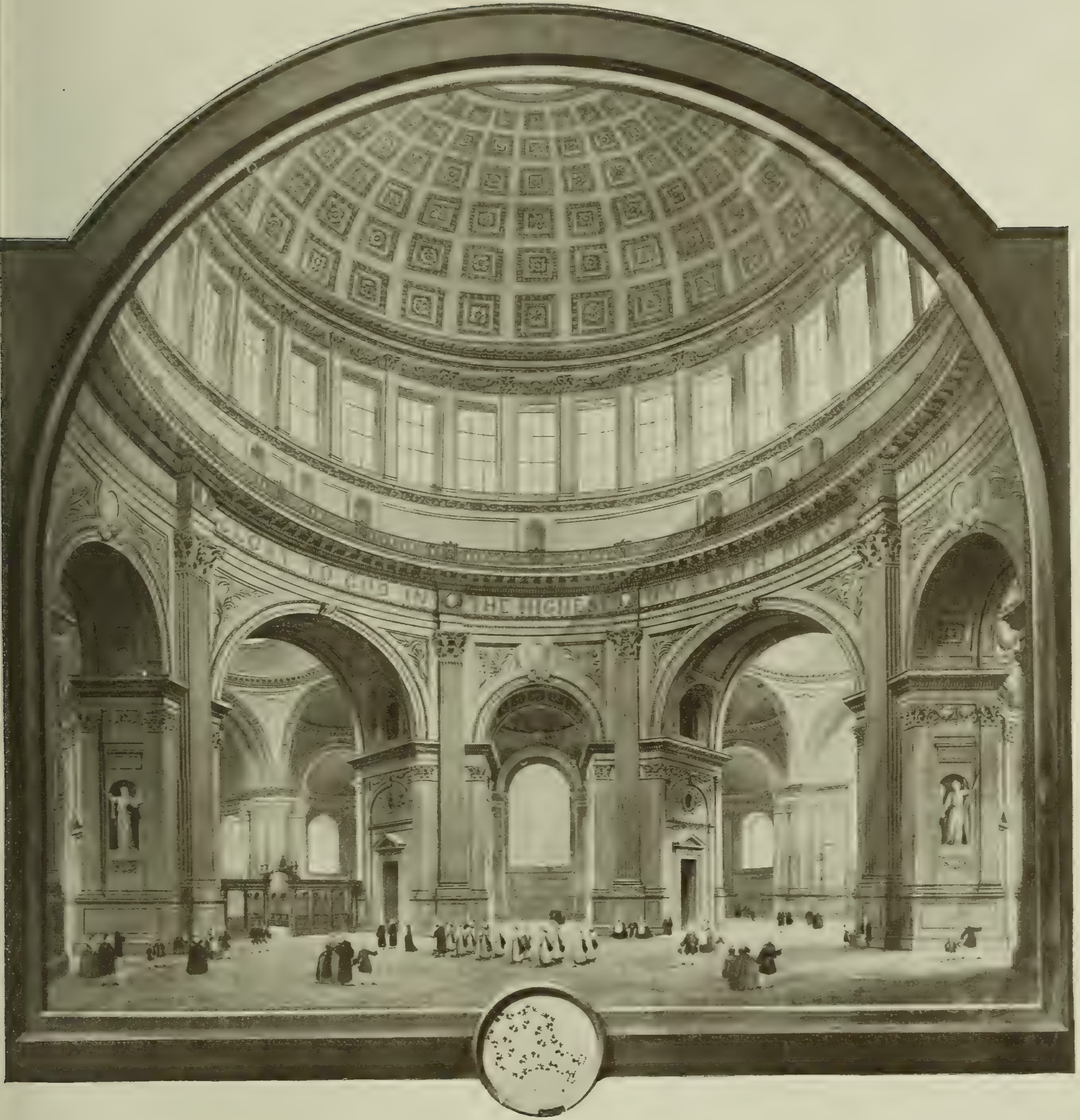
WREN'S FIRST DESIGN FOR ST. PAUL'S.—FROM AN ENGRAVING DATED 1749.





WREN'S MODEL FOR ST. PAUL'S (FIRST DESIGN).

(THE COLUMNS OF PORTICO ARE SHOWN RESTORED)


GLORY TO GOD IN THE HIGHEST ON EARTH PEACE

WREN'S FIRST DESIGN FOR ST. PAUL'S: INTERIOR VIEW, BY MR. J. E. GOODCHILD.

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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3806. JANUARY 14, 1916.

GOTHIC ARCHITECTURE.

AN age which is introspective and critical is seldom one which is marked by great successful creative effort in art, and the century which is past has been a barren one, especially in the domain of architecture, and the sterility of production has been marked in every country of Europe.

We have invented reasons to demonstrate why art in the past lived, and proved to our own satisfaction that the artist was formerly concerned with art alone and almost devoid of the mundane desires and aspirations of the commonplace present. We confuse art with morals, assuming them to be equivalent expressions of one idea; and in other phases of thought we deny that there is any connection between the two. Like the ancient Athenian, our desire has been to hear some new thing; like him we are frequently deceived into accepting old ideas as revelations of the truth, simply because they were expressed in somewhat original form.

Tolstoi, at one end of the scale, represents intellectual and, we may say, fatalistic pessimism: "The science of æsthetics, the science of the beautiful, neither did nor could vanish because it never existed. The Greeks, just like everybody else, considered art good only when it served goodness, and bad when it was in opposition to that goodness. And the Greeks themselves were so little developed morally that goodness and beauty seemed to them to coincide." And again: "To his class belongs the astonishing theory of Baumgartenian Trinity —Goodness, Beauty, and Truth—according to which it appears that the very best that can be done by the art of nations after 1900 years of Christian teaching is to choose as their ideal of life the ideal that was held by a small semi-savage slave-holding people who lived 2000 years ago, who imitated the nude human figure extremely well, and erected buildings pleasant to look at." Tolstoi, like the mystic and socialist he was, finally concludes his summary by saying that "Art is neither a pleasure, a solace, nor an amusement; art is a great matter. Art is an organ of human life transmitting man's reasonable perception into feeling." And the task of Christian art "is to establish brotherly union among men."

According to Mr. Clive Bell,* the essential quality in works of art is that they must possess "significant form," which is that which produces emotion, and in order to appreciate art we only need possess a sense of form and colour and a knowledge of their dimensional space; while he further states, "The forms of art are inexhaustible, but all lead by the same road of æsthetic emotion to the same world of æsthetic ecstasy." As against Mr. Clive Bell we have Mr. March Phillipps, who tells us that art is the expression of life, and in his *rôle* of a latter-day Ruskin again denounces the soullessness and folly of the Renaissance. But none of these writers prove their points; they start with theories, and facts are made to conform to them; but we doubt if any artist would find help or guidance from the criticisms made, though many of them are extremely ingenious. Of quite another character is Mr. Geoffrey Scott's recent work on the Renaissance,† as he builds up his theories from facts instead of inverting the process. More than this, he demonstrates, what is obviously true, that the Renaissance architects were not metaphysicians and moralists, but artists who were not deterred by logical scruples from producing harmonies of line and form, because they could not be made to conform absolutely to the practical requirements of structure. Mr. Scott, whose predilections are clearly in favour of the Renaissance, is more concerned in explaining and proving his point of view than in attacking that of others, which gives his book a practical value not possessed by other recent treatises.

As a broad rule, there are fewer reasons than are generally supposed for assuming that there is any great difference between the "truthfulness" of Gothic architecture and that which followed it—"unmeaning" and unstructural pilasters in Renaissance architecture have their counterpart in "unmeaning" areas of arcading spread over the walls of many mediæval churches. In no period of architectural history have builders, whether mediæval or Renaissance, hesitated to raise parapets and screen walls for architectural effect which have little relation to the roofing behind. The great mediæval church is the rendering of the constructive solution of a problem which gives scope for a perfection of architectural expression, but the same requirements of vault, thrust, and buttress can be carried out in other mediums, while the simpler requirements of domestic architecture—the warehouse and the business building—call for less ingenious and complicated methods of construction, whatever style they have been designed in. We are most of us secretly a little disappointed that the elaborate and ingenious construction of earlier times can be so readily dispensed with by the use of methods of building now known to us—a disappointment which finds exemplification in the reluctance of many to use steel, and in the expressed opinion that it can only be logically used in post and lintel construction. We are unable to see why, if we delight in arch, dome, and vault, and find that steel and concrete enable us to construct them with readiness, we should dispense with their aid because we can cover space more "logically" horizontally. To do so is to set a premium on what is difficult and to become unpracticable theorists, giving more value to ingenuity than to art. We believe that in every age mankind has constructed what he was obliged to construct economically to meet utilitarian wants in the simplest and most direct method known to him, and that, given greater opportunities, he has searched, not for the "most logical expression of structure," but the utmost he was capable of creating to delight his perceptions of beauty.

If the possibilities of ferro-concrete construction had been known in mediæval times, before the Gothic era, and if the materials had been forthcoming, it is certain that the course of architectural development would have been a different one; but if they had been discovered when Gothic development was at its height it is more than probable that the builders of Beauvais would have utilised them, not to institute a fresh departure in design, but as a means which would have enabled them to fulfil their aspirations to obtain more height and dimensions with safety. In a similar way the problems which Wren had to deal with in the dome of St. Paul's would have been simplified, and we have little doubt that neither the Gothic builders nor Wren would have troubled themselves about the truthful or logical use of the new material in the sense that modern critics use these terms. Gothic proportions in windows, vaults, and buttresses were obviously profoundly affected by the possibilities and limitation of stone; but, an ideal or manner of design being once formed and taken as a standard, new methods of obtaining the æsthetic results sought, which saved material and ensured safety, would have been adopted without discussion of abstract niceties. The Norman builders frequently built their huge piers of rough rubble, merely casing them with well-constructed stonework, and it was not until the desire for lighter proportions brought with it the necessity for sounder construction that they were generally adopted.

We think that the architectural requirements of one age give scope for greater architectural expression than those of another, and that mediæval architecture was the gainer, because the Church required great buildings possessing certain qualities; while the requirements of later ages gave less scope for the supreme expression of æsthetic skill, and therefore, given the equal necessity of any other type of building possessing inherent architectonic possibilities, great architecture would be likely to be produced in any age. For at least four centuries Western Europe devoted its energy so fully to the production of one type of building that all others may be held to be comparatively negligible, which more than any other reason accounts for the greatness of the mediæval ages in art.

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* "Art." By Clive Bell. † "The Architecture of Humanism."

The books which are of most value to the student of art are those which are devoted to description rather than to theory, which render Sir Thomas Graham Jackson's work on "Gothic Architecture" especially valuable.* The author states that he has never visited Spain, and considers that he can add nothing of value to what Street and others have written, while the war has prevented his visiting Germany and the Netherlands to revise notes taken years ago. Thus the scope of the work is limited to France and England, in which countries Gothic is at its best, and to Italian Gothic, which may be described as its weakest phase. The last section of the work deals with the various phases of Gothic art in Sicily. Most of the drawings with which the book is especially illustrated have been made by Sir Thomas Jackson at different times during half a century, and, together with the writing, show his intimate knowledge and study of the subject. We like his definition of the three principles which he states have governed the development of Gothic architecture as of every good style the world has seen. They are: "Solidity"—that is, the construction must be sound and good; "economy," used in the original sense of the word—"that is to say, a nice regard for arrangement and proportion, the due observance of circumstance of time and place, of means available, of the materials at your disposal, and of the mode of using them to the best advantage."

"The third principle is that the design should be the æsthetic expression of the construction. For architecture differs from mere building simply in this, that it is the art of building expressively and therefore beautifully. The first two principles are within the compass of everyone, but the third can only be applied in an artistic age and by an artistic people."

These are admirable definitions so long as the third principle is not ridden to death, for, as we have previously said, no style can be defined as being entirely logical, and it is doubtful whether any of the builders of the past have consciously set out to make it so. Constructive knowledge and its limitations have governed the beginnings of style in architecture; but, once a manner and tradition has been formed, we believe the master builders would have availed themselves of any new methods available to carry out their æsthetic conceptions. In other words, in the beginning construction governed style; in later periods of development great builders carried out their conceptions more independently of structural limitations.

The sections of the book dealing with vaulting are admirably explained and illustrated, and form a fitting prelude to a luminous account of the French cathedrals, which gives a vivid and terse picture of one of the greatest and most wonderful periods of architectural development the world has seen, culminating in the cathedrals of Reims, Amiens, and Beauvais. The Provincial French styles of Normandy, Burgundy, Toulouse, and Anjou, the distinctive features of which are well described and illustrated, bring the story of the development of French Gothic architecture to a close. As the writer says, "With Beauvais the history of the development of Gothic architecture in France is complete. We have traced its progress from a simple and tentative beginning at S. Denis and Senlis to Noyon and Sens, where Romanesque tradition was almost lost, and to Paris and Chartres, where it is quite neglected. At Reims the whole system of Gothic architecture is understood and carried out in its entirety, but without weakness. At Amiens the whole theory of construction was displayed and pursued to its logical results with full assurance and a little temerity. At Beauvais it was pushed further still, and if Amiens reached the margin of safety, Beauvais rashly overstepped it." A comparatively short chapter deals with the later geometrical Gothic of France, taking the reader to the fifteenth century.

The remainder of the first volume is occupied with a similar review of the earlier periods of English Gothic, in which the writer says we do not find "that triumphant display of constructive science which we see at Amiens. For one thing, our churches, though covering as much or more ground, are never so high as those French churches where this construction is most thoroughly developed, and there was not the same need for economy."

Sir Thomas Jackson dissents, with most architectural authorities, from Professor Moore's* dictum that true Gothic, being the logical development of a system of equilibrium attained by thrust and counter-thrust, is only to be found in France. As he rightly says, "It limits a style to only one of its manifestations, and vaulting, though important, does not cover the whole ground." An admirable description and analysis of Westminster fittingly closes the first volume.

In the second volume the development of the traceried window to the end of the geometrical Decorated Period precedes general chapters on that epoch, and the Flowing Decorated Period and the development of the English spire are followed by chapters dealing with the Perpendicular and Flamboyant Styles of England and France. Of the Perpendicular style the author writes:—"It has been the fashion to decry it as debased Gothic: as Gothic in its decrepitude; the work of mere mechanical designers, unworthy successors of the artists to whom we owe the noble work of the twelfth, thirteenth, and fourteenth centuries. That in some respects it declines from the standard of Amiens and Westminster may be admitted. But to condemn as a decadent art the style which has given us the glorious towers of Gloucester, Canterbury, Boston, Malvern, and Magdalen College at Oxford, those which cluster round the Mendips or stud the vales of Somerset, the splendid churches of the Fen country, the chapels of Windsor, of Henry VII. at Westminster, and of King's College at Cambridge, than which we might say architecture can add no more, is surely to trifle with the subject and mere pedantry." The story of English Gothic is, we think, rightly held to include Kirby House and other of the earlier pseudo-Renaissance work, but the writer takes a somewhat exaggerated view when he says that the "towers and steeples of Wren and his successors are more Gothic than Classic, and are as alien to Vitruvian rule as Westminster Abbey itself."

The Flamboyant architecture of France is well analysed and compared with English Perpendicular developments, "which never lost that air of severity and constraint with which it began at Gloucester." Sir Thomas Jackson writes:—"The sentiment of Flamboyant architecture in France is very different. Here is gaiety and luxury; dignity is forgotten; all must be joyous, fanciful, and clever."

The section on Italian Gothic, which completes the work, forms the most interesting part of an exceedingly able and scholarly book. "The Italian had none of the superstitious faith in the sanctity of ecclesiastical architecture which surrounded the northern cathedral with holy legend, mystic vision, and saintly miracle. The church itself had for him less mystery and inspired less awe. He was behind the scenes, and saw the working of the machinery and the manufacture of the thunder." In this sentence and another which occurs later—"The ideal of the Italian was colour, that of the Frenchman light and shade"—the author expresses what we feel to be the shortcomings of a style which is alternately over-praised by enthusiasts and somewhat unfairly criticised, for the northern peoples imported into their buildings the mysticism and sense of awe which for us will always be the abiding attraction of mediæval architecture; and it is possible, for this reason, that the palaces of Venice rather than the Italian churches will to us be the most appreciated examples of Italian Gothic. The interesting phases of Sicilian Gothic bring us to the author's conclusion, which ends with an eloquent appeal to architects to regard bygone art as their tutor rather than their model, to bind themselves resolutely to the problems of the day, and to new modes of construction, "to satisfy these demands in the most direct and common-sense way regardless of precedent and authority, and they will be working in the true Gothic spirit."

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* "Gothic Architecture in France, England, and Italy." By Sir Thomas Graham Jackson, R.A., F.S.A. In 2 vols. (Cambridge University Press. £2 12s. 6d.)

* "Development and Character of Gothic Architecture." By Professor Moore.

NOTES.

St. Paul's Cathedral.

It is stated that additional funds are urgently needed to provide for the safety of St. Paul's by strengthening the piers and buttresses. Two years ago an appeal was made for £70,000 for the Cathedral Preservation Fund, but only half the amount was provided when the war broke out. According to a daily paper, "Canon Alexander, Treasurer of St. Paul's, in the course of a statement on the structural condition of the building, said that the vast and imperfectly distributed weight of the dome has caused the present problem. The pier on which work has been going forward for a long time—standing at the critical point of pressure towards the south-west—has been reported in the last few weeks to be showing even graver conditions than had been anticipated. The danger is not so much one of recent settlement as of 'senile decay,' accelerated by the gradual pressure of the dome, the rusting of iron, and internal degeneracy of the extremely inadequate repairs executed at some earlier period. It was said recently that 'only the loyalty of the materials to one another' has kept the fabric safe so far. Some of the most delicate work, thus taken in hand just in time, has already been carried out, but it is not known what difficulties may arise elsewhere." It is unfortunately true that great buildings always entail the expenditure of large sums of money in repairs when they have been in existence for a few hundred years, a result which is largely the effect of the truth expressed in the Eastern axiom, "The arch never sleeps," and St. Paul's is apparently no exception to the general rule. The necessary funds will, we hope, be provided without undue delay.

The Organisation of Scientific Research.

The Board of Education has issued a very important leaflet, which states that there is a strong consensus of opinion that a special need exists for new machinery and further State assistance in order to promote and organise scientific research, chiefly with a view to its application to trade and industry, and it is therefore proposed to establish a permanent organisation for the promotion of industrial and scientific research. The scheme provides for the establishment of a Committee of the Privy Council responsible for the expenditure of any new moneys voted by Parliament for scientific and industrial research, and a small Advisory Council responsible to the Committee of Council, and composed mainly of eminent scientific men and men actually engaged in industries dependent on scientific research. The primary functions of the Advisory Council will be to advise the Committee of Council, first, on proposals for instituting specific researches; second, *proposals for establishing or developing special institutions or departments of existing institutions for the scientific study of problems affecting particular industries and trades;* third, the establishment and award of Research Studentships and Fellowships. Under the clause we have italicised the Royal Institute of British Architects might apply for a grant for the thorough scientific investigation of dry rot, such investigation to be carried out in connection with a specified college of science, and a great boon would be conferred on the building industry. All particulars of procedure can be obtained through the Board of Education, which, we understand, is more than ever convinced of the necessity for the new departure.

The Housing Problem.

At the Scottish National Conference, promoted by the Labour Party Housing Committee, one of the speakers stated that private enterprise had absolutely failed to meet the necessities of the case—which is both untrue and unfair, considering that until the last few decades the whole of the housing in the country was provided by private enterprise. The late Government has interfered with the natural laws of supply and demand by imposing what amount to stiff penalties on private enterprise, and it is this interference which is responsible for most of the present shortage. Labour leaders are not concerned with questions of national finance, and the labour sections of the community only contribute indirectly to national taxation. In these circumstances they are inclined to advocate national expenditure, failing to see that their employment depends in no small measure on the ability of individuals to employ their capital remuneratively, which is intimately connected with the state of the national finances. We are, in a measure, glad that the present congestion has occurred, as it may serve to bring home to the community the truth that it is in the national interests that the claims of all classes should receive full and adequate consideration. Another speaker observed that what was necessary was that public authorities should set a standard and see that the speculative builder and others observed that standard. This is true enough, and quite within the powers of the authorities, but it is also necessary that the rewards of enterprise shall not be taken away from the speculator, or the last state of working-class housing may be worse than those which obtained formerly.

Huddersfield Housing.

A special meeting of the Huddersfield Town Council has been appointed to consider and report on the means to be taken to make good the undertaking given to the Government to provide accommodation for the increased population which would be brought to the neighbourhood if Huddersfield were made the seat of the British Dyes Industry. The Government is being asked to give special grants on the ground that the dye industry is an urgent national undertaking, while the building societies may co-operate by lending money in accordance with a suggestion made by the Mayor. In the meantime thousands of labourers engaged in the construction of the new works have had to be provided with temporary huts by the company, the lodging-houses are full, and rewards are being offered for information as to empty houses. The housing shortage, acute in most parts of the country, has apparently reached its most acute point in Huddersfield.

Piazza del Popolo, with S. Peter's on the horizon (at the side appears Bernini's Church of S. Maria dei Miracoli). (*See page* 44.)

The "Beata Albertona" (1675): S. Francesco a Ripa, Rome.

BERNINI AND THE BAROCCO:

III.—BERNINI AS A MAN.*

By Selwyn Brinton, M.A.

In the two earlier notices on this subject which have appeared in the pages of the *Builder* † I have treated Bernini's achievement both in sculpture and in architecture; it only remains to me now to complete my survey, within the limits allowed me here, by what I have described under this heading with the title of "Bernini as a Man."

I venture to believe that this may be found not the least interesting part of that survey.

Modern research has done a great deal to revise the position of the gifted artist in relation to what we may call his "*milieu*"—the surroundings, the influence of the spirit of the age in which he lived, and upon which his creative genius expended its treasures.

Gian Lorenzo Bernini was born, as we have noted, in December of 1598; his long and brilliant career ended on November 28, 1680. We are therefore with him far away already from the great creative effort of the Renaissance. "The dawn of his life," says Fraschetti, "was already the sunset of art. He could only inherit from the last survivors of that past the exaggeration of form, the contrast of light and shade, the academic conventionalities of conception and canons of art. . . . His genius has all the enchantment of life among things that are dead—the sweetness of a beautiful living form among the ashes of a deserted dwelling-place."

But not all was dead even within that age. It was an age which saw the Church, recovering herself after the Counter-Reformation, reappear as a vital force in Europe, under the intimate and overpowering influence of the Company of Jesus: it saw Rome, among the general decay of Italian life and politics, assert herself once more as the City of Art and the Centre of Catholicism.

Gian Lorenzo Bernini, established for his early life at Rome under the direct patronage of the Papacy, and of more than one among the College of Cardinals, was exposed to the full current of this movement in Catholic life and thought.

He could not have opposed it; and if he had done so he would have condemned his art to atrophy and extinction. He was exposed to a force which was stronger than himself; and this is perhaps what Adolfo Venturi means when he calls him a puppet of destiny.

But he never had sought to oppose this influence. He absorbed its good and its evil into his art and his personal life; and it is the outworking of this influence in his creative art which I propose to trace in this necessarily brief summary.

That the antique had come to him in youth as a tremendous and overpowering revelation we have traced both in the records of Baldinucci and in the evidence of his own earlier sculpture; that the study of Nature had been no less attractive we saw in the realism of such early creations as the bust of Monsignore Montoya, or the S. Lorenzo, or his later Cardinal Scipione Borghese.

With his S. Lorenzo we have even the story, from his son Domenico, that the artist had thrust his own leg into the flame to note the effect of the shrinking of flesh from fire; and here we have just the material which in the earlier Renaissance would have produced such a realist as Pollaguolo, such an idealist in form as Buonarroti.

But in the moment of his development, when in the exquisite Daphne he had proclaimed to the world the message of a new vision of beauty, he is caught up in the advancement of his Papal patron, and bound fast to the chariot wheels of a triumphant and expansive Papacy. His art is diverted to architecture, wasted—we may almost say—in painting, trammelled with the etiquette, the intimate duties of a Papal Court; and when again he turned to sculpture in later life it was under those new influences with which the Jesuit movement had slowly enveloped him.

The realist of the wonderful bust of Montoya, of the Scipione Borghese, of the lovely and wilful Costanza Buonarelli, the noble classicism of his Apollo and Daphne, and the exquisite reserve of his monument to Carlo Barberini is changed in this later art into the effort to impose upon the marble the sentiment which underlies human endeavour—the sense of monarchic power inspired by a Louis XIV., the outpouring of religious ecstasy of a Saint Theresa.

It is to be noted here that Bernini's whole busy life in Rome had been in close contact with that Jesuit Order which had there its natural centre.

One of his early commissions (A.D. 1622) had been that of the half-figure of Cardinal Bellarmino, procured for him through the influence of Cardinal Farnese, for the Church of the Gesú at Rome—a monument which is still in its place on the left of the high altar. The whole church is indeed a wonderful externalisation of the ideas which lay behind this Jesuit movement of the seventeenth century. "The Jesuit," says Taine, "weakened the redoubtable doctrine of Grace, smoothed over the rigid prescriptions of the Councils and the Fathers, invented the more indulgent direction of the conscience, an easier moral law, a more accommodating casuistry, a facile system of devotion; and by the cleverest manipulation of distinctions, restrictions, interpretations, probabilities, and all the brushwood of theology, succeeded with his supple hands in restoring to mankind the liberty of pleasure. . . . Within these hands"—says this writer—"so ingenious and so delicate Religion has become fashionable. She seeks to please; she adorns her temple like a salon; she even adorns it too much. One would say that she makes a display of her riches; she tries to amuse the eye, to dazzle it, to provoke the sated interest; to appear smart and almost coquettish. . . . To see this style," he adds, "in all its splendour one must go, near the Piazza Venezia, to the Gesú, the central monument of their Society built by Vignola and Giacomo della Porta late in the sixteenth century. The great Pagan Renaissance is continued there—but is altered. The semicircular vaultings, the cupola, the pilasters, the pediments, all the main features of the architecture are, like the Renaissance itself, revived from the antique; but the rest is decoration, and turns to luxury and finery. With the solidity of its site and the roundness of its forms, with the pompous majesty of its pillars surmounted by capitals of gold, with its frescoed ceilings wherein great figures, draped or half-naked, whirl in space, with its paintings enclosed in rich frames of worked gold, with its angels in sculptured relief who spring forward from the ledge of the consoles, this church resembles a magnificent banqueting-hall—some kingly town hall, which decks itself with all its silver, all its glass, its damask linen, its curtains trimmed with lace, to receive the monarch and do honour to its city. . . . Out of all this imposing and dazzling decoration an idea emerges, peals forth its note of proclamation, 'Ancient Rome had united the universe in a single Empire: I revive her power, and I inherit her succession (*Je la renouvelle et je lui succède*). What she had done for the bodies of men I will do for their spirits. By my missions, my seminaries, my hierarchy I will establish universally, eternally, and magnificently the Church.'"

I have used this luminous criticism of the great French writer because it gives just the impression of this wonderful sixteenth-century church, within whose walls Bernini may have listened to those sermons of the famous Jesuit preacher, Padre Oliva, which he illustrated with drawings which survive. This very fact shows how intimately the Jesuit teaching affected his later life; but it is in his systematisation of the colonnade of S. Peter's that this conception of the grandeur and universality of the Church of Rome, which had slowly penetrated his consciousness, finds a definite architectural expression.

"The wide protecting arms, solemn and pitiful as those of Jesus," wrote Fraschetti of those wonderful Bernini designs, which I have already had occasion to notice, "are extended to the fascinated multitude in a majestic circle that seems to enclose the world. The vast piazza, closed in by countless marble columns, animated by the gush of the fountains that gleam with their silvery foam, dominated by the massive obelisk of Sixtus V., pure and severe in its classic lines, is the great courtyard which worthily prepares us for the visit to the supreme temple. . . . This miracle," he adds, "was created by the genius of that portentous magician, Gian Lorenzo Bernini. . . . The colonnade of S. Peter's, simple in its lines, sober in its decoration, is his architectural masterpiece."

But perhaps it is in his later creation of the Cathedra, the Chair of S. Peter, that we come closest to the spirit of his age, that the "fervour of his soul escapes on the wings of the fantastic and the improbable."

"In these bronzes which undulate into the air, in the columns twisted beneath the great cupola, the 'colossi' who support with their forefinger the chair of S. Peter gleaming with gems; in the gladsome angels of bronze and all this refulgent glory of cherubs and angel forms among the cloud and rain of gold, in all that tremendous furnace and flame of gold there reveals itself, together and along with the pomp of the Catholic and Apostolic Roman

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† See our issues for November 26 and December 31, 1915.

Basilica, the ideal of Jesuitism, trying to subjugate the masses beneath the majestic fascination of the grandeur and glory of the Papacy.”

This interesting passage of Fraschetti seems to give a very valuable support to my contention; because we have here the famous biographer of Bernini, in a work which is essentially devoted to his artistic creation, discovering in this crown of his achievement in S. Peter's the influence of the great Society of Jesus, seeking to impress with the splendour of Rome, the mighty tradition of her hierarchy, the docile and admiring crowd.

But this was only one side of the movement which sought to catch all the life of the time within its wide net. The other, and far more attractive to the higher and more spiritual minds, and one which appealed strongly to our artist, was that of mysticism; and here we have a whole group of monumental sculpture—“The Ecstasy of Santa Teresa,” the “S. Jerome” and the “Magdalen” of the Capella Chigi at Siena, the “Beata Albertona,” the “Angels of the Passion,” designed for the bridge of S. Angelo, which illustrate very completely this side of the master's sentiment.

Above all, the “Santa Teresa,” which to the lover of Bernini must always remain as one of the typical creations of his genius.

Technically we find again here the mastery over the marble which he admired in the “Daphne,” the “Costanza Buonarelli,” the bust of “Cardinal Scipione,” but inspired now by a different sentiment, and aided by a wider knowledge of architectural decoration.

It has been my privilege from time to time within the pages of the *Builder* to call attention to the claims of architectural sculpture, claims which are only now beginning to be understood, at any rate in British art. Bernini, himself a sculptor and architect in one, understood this side of his art completely. He designed his single figures or groups, such as his Papal monuments, the “Constantine,” the “Albertona,” the “S. Teresa”—definitely with a view to their *locale* and lighting; in this last-named group especially the light is very skilfully planned to heighten the emotional effect by falling full on the recumbent form, the upturned face of the swooning saint.

She is depicted here in the moment of ecstasy when Divine Love, in the form of a beautiful young angel, is about to pierce her heart with his flaming dart. She sinks back overwhelmed at the lovely vision; even the draperies here in their sharp accentuated folds seem instinct with emotion, her whole attitude, her closing eyes and parted lips, her hands (those exquisite hands of Bernini), and lovely naked feet extended in utter abandonment, and the poise of her whole sinking body seems one of almost physical rapture.

The French critics, from De Stendhal to Zola, have not failed to note this point. “Sainte Thérèse,” writes De Stendhal, “is represented in the ecstasy of divine love; her expression is the most living and most natural. An angel who holds a dart in his hand seems about to uncover her breast to pierce her heart. He regards her smiling with a tranquil air. What a divine art! What a pleasure to behold!” And Taine—“We returned by Santa-Maria della Vittoria to see the Sainte Thérèse of Bernini. She is adorable; falling back, fainting with love, her hands, her naked feet drooping, her eyes half closed, she sinks away from happiness and ecstasy. Her face is thin but noble in type. This Bernini has discovered here modern sculpture, which is founded on expression, and to complete his effect has arranged the light so that it should pour on this delicate pale face an illumination which seems that of the inner flame, so that through the marble which seems to breathe transfigured to life we see the light of the soul immersed in happiness and rapture.” Emile Zola, in his “Rome,” goes even further:—“Une vierge ignorante et pure, et qui brisée de volupté ouvre languissement les yeux . . . encore pâmée. . . . Ah, cest á mourir!”

But there is no need to insist too much upon this point. Bernini had to represent a psychical phenomenon in terms of material form; he had to thus translate spirit to matter in terms which would be comprehended by an age which enjoyed the erotic romance of Cav. Marini as much as the mystic theology of Molinos; and quite apart from this, as Dr. Weibel justly points out, his treatment of the scene is accurately drawn from the saint's own account of the vision that came to her, as described in her autobiography.

Colossal Statues of S. Andrew and S. Helen: S. Peter's, Rome.

There can be no doubt that this wonderful group expressed in plastic art a movement of the spiritual life which affected very deeply the Rome of Bernini. Theresa, the Saint of Contemplation, had become a symbol of this new movement of the soul's life.

> “*Dum tota fervet intimis medullis*
> *Teresa, crescit et coruscus ignis,*
> *Amore flante Numinis.* . . .”

These are the words of a poet of this period, a period of which Taine, still speaking of Bernini's S. Teresa, remarks:—“The commentary of such a group as this is in the contemporary works on mysticism in the famous ‘Guide’ of Molinos, republished twenty times in twelve years, and which from one palace to another in this idle city of Rome conducted the souls, by the intricate by-paths of a new spirituality, even to love without a lover, and yet further still. While the lofty faith of Spain consumed itself in its Catholicism, like a taper in its flame, and prolonged the feverish enthusiasm which had fired S. Ignatius and S. Theresa, more sensual Italy, taking out the thorns of devotion, drank in its odours as a full-blown rose, and . . . accommodated religion to the voluptuous sweetness of its morals and its sonnets.”

In a fascinating romance which appeared some thirty years ago the hero, an English cavalier, coming to Rome indirectly under the Jesuit influence, becomes himself infected by this new view of the spiritual life, and comes to know personally its creator. “This was Michael de Molinos, a Spanish monk, who, coming to Rome some years before, began to inculcate a method of mystical devotion which he had no doubt gathered from the followers of St. Theresa, who were regarded with great veneration in Spain, where the contemplative devotion which they taught was held in high esteem. . . .

To all who came to him for spiritual comfort and advice he insisted on the importance of mental devotion, of daily communion, and of an inward application of the soul to Jesus Christ and to His death. So attractive were his personal qualities, and so alluring his doctrine to minds which had grown weary of the more formal ceremonies and acts of bodily penance and devotion that thousands thronged his apartments, and ‘the method of Molinos’ became not only a divine message to many, but even the fashionable religion of Rome.”

I have dwelt thus fully on the group of S. Teresa, because it expressed an influence which we may certainly believe was part of Bernini's later life. Like this Cavaliere de S. Giorgio in Shorthouse's romance of “John Inglesant,” he, too, may have shared in “the act of devotion, which is called the contemplative state, in which the will is so united to God and overcome by that union that it adores and loves and resigns itself up to Him.”

There are other figures in which his new sense of the inner life finds expression, notably in the “Beata Albertona,” caught up like Teresa herself in the ecstasy of the Divine Vision, or in those lovely angel forms of the Bridge of Sant' Angelo, two of which were placed by Clement IX. in S. Andrea della Fratte.

But I have preferred to speak in detail of the S. Teresa in this side of his art as the most typical, the most supreme in technique, the most lovely in conception. These influences within his art—the message of the marble beauty of the antique world, reaching him as truly as to any Humanist or Quattrocento artist, the fascination of nature and expression of character, the humour of life exhibited in his Carnovale comedies and caricatures, the glory of Rome symbolised in her triumphant Papacy, lastly the inner message, the act of devotion which enters “into the life of God, into the heavenly places of Jesus”—all these are elements within this complex life of Gian Lorenzo Bernini, and all find their utterance within his art.

In the last years of his life he came more and more under the influence of religion, into the intimacy of the great Jesuit preacher, Padre Oliva. Of his painting of “Christ Crucified” at this time he tells his son:—“In this work I have drowned my sins, and Divine Justice will find them washed by the blood of Christ.”

But his art is always broadly human; and the epitaph, still upon his house in Rome and set there after his death, expressed truly the character of a life work “before which Popes, Princes, and peoples alike bowed the knee.”

S. B.

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SLATE TRADE PROSPECTS.

Mr. J. Issard Davies, upon being re-elected chairman of the Carnarvon Harbour Trust, said it was a common thing to say that the slate trade was played out. It was nothing of the kind. It was true that substitutes had been placed on the market, but they had never stood the test. In the last gale of all the only roofing that stood was Carnarvon slates. He hoped, therefore, that the slate quarries would clear for action.

THE SURVEYORS' INSTITUTION.

AN ordinary general meeting of the Surveyors' Institution was held on the 10th inst. at No. 12, Great George-street, Westminster, S.W., Mr. J. H. Oakley, Vice-President, in the chair.

The minutes of the previous meeting were read and confirmed.

It was announced that seven donations had been received for the library in addition to four donations of two guineas each, and it was agreed that the thanks of the Institution be sent to the donors.

Mr. R. M. Kearns (Fellow) then read a paper entitled "Some Notes on Reinforced Concrete," in the course of which he submitted the following notes on reinforced concrete structures. Starting with H.M. New Stationery Office, a building which has attracted much attention, he quoted, with the permission of the Commissioners of H.M. Office of Works, the following extracts from the specification :—

"*River or Pit Ballast.*—To be free from sand and dust, must not contain any traces of calcareous, argillaceous, or other foreign matter, and to be broken into various sizes, so that all shall pass a ¾-in. mesh and be retained on a ¼-in. mesh. The sand to be screened out of the ballast, all passing the ¼-in. mesh to be reckoned as sand.

Sand.—To be freshwater, river, or pit sand, absolutely clean and sharp, properly graded and varied in size; all passing a ¼-in. mesh, and at least 75 per cent. passing an ⅛-in. mesh.

Cement.—The cement shall be Portland (slow-setting) to comply with the British Standard Specification (1910) for Portland cement. The builder is to provide with each consignment the maker's certificate of quality, but such certificate is not to be taken as conclusive. Such tests as the architect may direct will be made from time to time, and no consignment is to be used until the architect has signified his approval. The builder is to deliver consignments in advance for use, so as to permit of twenty-eight-day tests being made without causing delay in the progress of the work.

Formwork.—The whole of the timber centering, etc., used for the formation of concrete work is to be constructed in a solid, rigid, and substantial manner. The centres to be so formed that they may be removed in portions without shaking or jarring the concrete. To be wrought thicknessed and close-jointed, except where walls and ceilings will be plastered, and also to all external work where boarding, rough from the saw and close-jointed, is to be used. No part of the centering is to be removed until the concrete is thoroughly set, and until the consent of the architect has been obtained. The formwork is to be thoroughly cleared of shavings and rubbish, and must be hosed out before the concrete is deposited.

Concrete.—To be made up as follows :—

Cement	1 cwt.
Sand	2 cubic ft.
Ballast	4 ,, ,,

To be sufficiently watered and mixed thoroughly in an approved mechanical appliance to the satisfaction of the architect. Test cubes, 6 in. by 6 in. by 6 in., of the concrete are to be mixed by the builder from time to time as the architect may direct. These cubes are to have an ultimate crushing strength of 1,800 lb. per square inch at twenty-eight days. The concrete to be deposited in layers not exceeding 3 in., unless otherwise permitted by the architect, and to be properly punned and consolidated. The reinforcement to be completely surrounded and covered. No traffic on or over the concrete to be permitted until it is thoroughly set. It is to be protected from frost, inclement weather damage, or too rapid drying, and kept well wetted. No steel, except binding rods or stirrups, is to be nearer than 1½ in. to the external face of concrete, except in thin floor slabs, where the cover may be reduced to ¾ in. No concrete to be used which has been left standing and begun to set. Floors and roof to be finished smooth with a rule. The roof slabs to be laid to fall.

Granolithic Finish.—The upper ½ in. of floors (except where otherwise specified) to be formed of one of cement to two of approved granite chippings to pass a ¼-in. mesh, and to be free from dust. To be laid while the reinforced concrete is green, and to be trowelled off within an hour of laying. This surface finish to be in addition to the structural part.

Steel.—To be obtained from firms approved by the architect, and to be of such quality as to withstand the following tests :—The ultimate tensile strength lengthways with the fibre is not to be less than 27 tons, and no more than 32 tons to the square inch. Specimen pieces of steel are to be bent cold until the ends close over a bar, the diameter of which is the same as that of the piece to be tested. The steel rods throughout are to be of the exact lengths and diameters shown on drawings. No welding or piecing of rods will be permitted, and they are to be bent where required to templates and while cold. After such smiths' work as may be required on the rods has been completed, the steel of which they are formed must present a smooth surface free from seams, flaws, or cracks. Great care is to be exercised in the fixing and maintenance—during the placing of concrete—of the steel rods in the exact positions shown on the drawings, and in securing the links and stirrups by which the rods are to be connected together in the positions shown for them, so that the position of the reinforcement in the finished structure may exactly correspond with the position as designed.

External Finish.—Render the reinforced concrete work where exposed externally with Portland cement and sand in the proportion of one of cement to three of sand, ½ in. thick, finished with an approved floated face. The finishing coat to be applied before the backing is thoroughly set. The concrete is to be hacked to form a sufficient key for the rendering, and is to be cleaned and thoroughly wetted before the rendering is commenced.

Boiler Chimney.—To be lined to a height of 50 ft. with approved Staffordshire firebricks laid in fireclay, with all joints well flushed up. To have 1½ in. air space between the firebrick and concrete, ventilated as directed. The chimney is to be built clear of the building, as shown on drawings.

Flues.—Smoke flues in chimney-breasts are to be formed of terra-cotta pipes 10 in. in diameter and with butt joints."

Bills of quantities were prepared, from which a schedule of prices was made for the adjustment of variations. The most important items were, briefly, as follow :—

Excavation from general area over site	At different depths.	Per yard cube.
Ditto, in pier holes ..	,,	,,
Planking and strutting ..	—	Per ft. super.
Ferro-concrete (steel taken separately) :—		
In footings to columns ..		Per yard cube.
In columns to basement and sub-ground floors		,,
In ditto to other floors (each floor kept separate)		,,
In sub-ground and ground floor and in beams to same		,,
In other floors and in roof (each kept separate) ..		,,
In external walls at various levels (one item)		,,
In internal ditto ditto (one item)		,,
In area walls		,,
In chimney and foundations to same (one item)		,,
In bridge (one item)		,,
Steel bars prepared and hoisted (one item)		Per ton.
Formwork :—		
To columns, internal or external (one item)		Per yard super.
To floors, including beams (sides of beams, etc., not measured but covered by price) (one item)		,,
To staircase (measured on girth of riser and soffite) ..		,,
To chimney		,,
To internal and external walls (one item)		,,
To bridge (one item)		,,
To retaining walls (measured both sides and on the flat)		,,
To mouldings (excepting to columns)		Per foot super."

Proceeding, the author said :—

"I have omitted the prices advisedly. The schedule from which the foregoing items were taken does not coincide with the "Standard Method of Measurement" now recommended for general adoption, but it answered its purpose satisfactorily, and had the "Standard Method" been framed in 1911, when the erection of the New Stationery Office was begun, I doubt, in view of the large quantities of materials involved, whether the concrete required for this building would have been billed in "feet cube" or the steel in "pounds."

A short time ago I saw the bills of quantities for reinforced concrete in connection with a large industrial building, and found that the quantities had been prepared somewhat on the lines of the "Standard Method" from complete drawings, showing reinforcements and other work. Bills of quantities such as these may be admirable so far as they enable contractors to prepare close estimates when tendering, and also in regard to the data they provide for the accurate—though perhaps unnecessarily elaborate—admeasurement of variations, but I think they are incomplete if they fail to give the contractors the total quantity of concrete in "cubic yards," and that of steel in "tons." It may be argued that the contractors themselves are able to calculate these totals from the details given, but it is not fair that they should be called upon to do so, and it would be better for all parties if the calculations were made by the quantity surveyor. If such totals were furnished, in addition to the detailed quantities which only should be priced, the contractor whose tender is accepted could at once make arrangements for obtaining his materials. Further, it is held by estimators that these total quantities are essential and important factors in arriving at the detailed prices on which the tender is based. The contractors would also ascertain the quantity of cement from that given for the concrete. On the proportions of 1 + 2 + 4 they would probably calculate at the rate of 1 sack of cement to ⅓ cubic yd. of concrete. Thus the number of yards multiplied by 3 would give the required number of sacks of cement; dividing this number by 11 (where each sack weighs about 204 lb.) the cement would be shown in tons.

The grand totals to which I have referred would also show the ratio of steel to concrete—generally about 2 cwt. of steel for 1 cubic yd. of concrete—from which the average cost of the complete reinforced concrete, at per yard cube, could be ascertained and, on occasion, made use of when measuring for certificates in respect of advances. In this connection the surveyor would allow about 60 ft. super. of formwork for every yard cube of the finished concrete.

It may be interesting to note that the proportions of the concrete for the industrial building to which I have alluded were 1 cwt. cement, 2¼ cubic ft. of sand, and 4½ cubic ft. of aggregate, as against 1 + 2 + 4, the slightly richer brand adopted by the Office of Works."

The lecturer then proceeded to give some particulars of the New Science Museum, South Kensington, after which he went on to say :—

"Pronouncements are invited on the following points, about which there is diversity of opinion among experts :—

While some authorities allow the formwork to be covered with a wash of lime before the concrete is deposited, in order to ensure good surfaces when the centering is struck, others regard it as unnecessary, and are satisfied if the boards are kept well wetted. And while the formwork is treated with "concrete oil" in some cases, it is condemned in others. It is certain, however, that the formwork should not be oiled if the concrete is to be plastered.

Differences of opinion also exist as to the best means of making concrete waterproof. Experts agree, however, that the concrete should be moderately rich and that the aggregate and sand should be so well graded as to fill, if possible, all pore spaces. The concrete should be mixed and laid with the greatest care, and should be allowed to set and harden before its permeability is tested. Some authorities state that the mixture should be "fairly wet," and that "on no account should a dry mixture be made if intended to be watertight." On the other hand, one authority states that the mixture should be "fairly dry" and "well rammed in thin layers."

Coming to the concrete roof or flat, with its covering of asphalt, the question arises whether the concrete should be finished smooth with a rule, or receive, while it is green, a floating of cement. Either course provides the necessary even surface for the asphalt, which should be applied in two coats, the first being more bituminous than the second. When this method is followed very little trouble arises from expansion and contraction, although, in the case of a very wide flat, unbroken by skylights, it would perhaps be advisable to form expansion rolls in the asphalt. One well-known firm of asphalters prefers to lay the asphalt (two thicknesses of ⅜ in.) on stout canvas nailed to a cement floated surface with zinc nails. It appears that asphalt will adhere very firmly to concrete walls or flats if the surface of the concrete is first painted with coal-tar. The latter should be "heated in small quantities, brought just to the boiling-point, and then applied immediately."

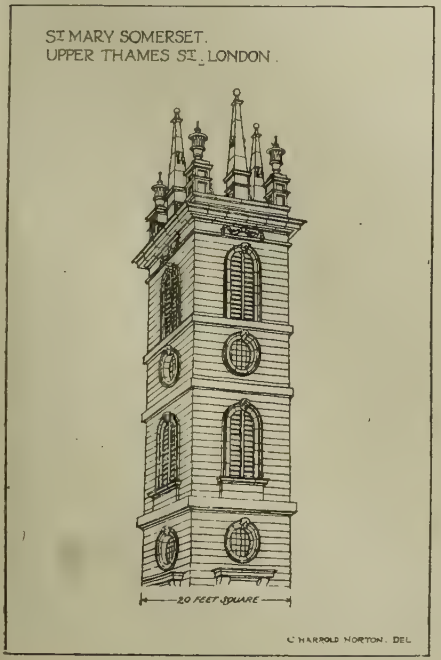
With regard to the various "systems" of reinforcing concrete, can it be declared whether there is cause or just impediment why the rods in beams should not be slightly larger in section and fewer in number? It certainly seems feasible that they should in no case be nearer to each other than 2 in. in order that it may be tolerably easy for the concrete—not thinned out, but containing its proper proportion of aggregate—to "surround" the reinforcements, and thus have a chance of doing its full work."

After making allusions to the new ferro-concrete cathedral at Demerara from particulars given in our issues of November 13, 1914, and December 17, 1915, Mr. Kearns concluded by saying :—

"Let us see to it that our reinforced-concrete buildings are as beautiful as art can devise and funds permit. Mistakes have been made in the past; they have taught us much, but there is still much to learn. We must, therefore, press on to a fuller knowledge of this wonderful building material—of the science that governs its construction and the art with which it should be applied. Difficulties will confront us, but they will not be so formidable that they cannot be overcome.

The distant mountains that uprear
Their solid bastions to the skies,
Are crossed by pathways that appear
As we to higher levels rise."

A vote of thanks to Mr. Kearns for his paper was proposed by Sir Henry Tanner, who made reference to some further interesting facts relating to the construction of both H.M. New Stationery Office and the New Science Museum, South Kensington. The vote of thanks was seconded by Mr. George Corderoy, and supported by Professor Henry Adams, Mr. Hy. Lovegrove, Mr. T. J. Carless, and Mr. J. H. Blizard.


ST MARY SOMERSET.
UPPER THAMES ST. LONDON.
20 FEET SQUARE
C HARROLD NORTON. DEL

The Chairman announced that the Council had tried to meet the difficulties under the present war conditions not only by altering the time of meeting from eight to five o'clock, but also by reducing the number of meetings, which in future would be held once a month instead of once a fortnight. The next ordinary general meeting of the Institution will be held on Monday, February 7, at 5 p.m., when a paper will be read by Mr. C. F. Slater entitled "Practice in Assessing Dilapidations."

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THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. III.—The Demolished Churches.

ELEVEN London churches escaped the Fire, of which eight still remain, namely, All Hallows, Barking, close to Trinity-square; St Andrew's Undershaft, at the junction of Leadenhall-street and St. Mary Axe; St. Bartholomew the Great, West Smithfield; St. Ethelburga, Bishopsgate; St. Giles, Cripplegate, in Ford-street; St Helen's, Bishopsgate; St. Katherine Cree in Leadenhall-street; and St. Olave's, Hart-street, which still afford some idea of the London churches anterior to the Great Fire. Thirty-five churches were not rebuilt after the Fire, their parishes being united with those of other churches; but of the forty-nine churches rebuilt from Wren's designs within the City of London, fifteen had been demolished before 1907 to make room for other buildings. St. Christopher le Stocks was pulled down to enlarge the Bank of England in 1781; St. Michael, Crooked-lane, was destroyed when the new London Bridge was built; St. Bartholomew by the Exchange, to provide room for the Sun Fire Office; and in 1841 St. Benet Fink was destroyed on the rebuilding of the Royal Exchange.

More churches were pulled down in consequence of the Union of City Benefices Act, and, although the opposition to further destruction is stronger to-day than it was formerly, the danger of further demolition must always be a very great one, because of the immense value of the sites and the need of funds to provide churches in outlying districts where the increase of population has been rapid. But it is to be hoped that the churches which remain will be preserved, since the value of their sites, great as it may be, is small compared with the value of the historic associations of the buildings, forming a link, as they do, with the old London of history. Apart from this, their value as architectural monuments is enormous, as we should realise by imagining Ludgate-hill without St. Martin's, Cheapside without St. Mary-le-Bow, and Fleet-street without St. Bride.

The position of the towers in some of Wren's churches seems ill-chosen, as in many cases they are hidden away in the least prominent position of the sites, the explanation being that as far as possible an endeavour was made to build the new towers in the same position as that occupied by the towers of the churches which formerly occupied their sites.

Among the churches which have been pulled down, few were so interesting as St. Antholin and St. Benet Fink, which we illustrate in this issue from drawings published sixty years ago. The *motif* of St. Mary Abchurch and St. Mildred is the circular dome resting on pendentives; the two churches we illustrate are based on the ellipse, in one case expressed externally by an elongated polygon, in the other partly carried out in a similar way. In both of them the internal conception of design appears to have controlled the external treatment and determined its lines, and they must have been buildings of exceptional interest and charm.

The ellipse is of all forms in architecture one of the most difficult to treat satisfactorily, and for that reason and the constructional problems involved has rarely been indulged in by English architects; while it became, of all curves, the most favoured in many phases of the French Renaissance. The spacing of a colonnade on the curve of an ellipse becomes a complex problem, unless the curve is one of considerable size, as the spacing which is satisfactory and effective in the flattened sides usually appears too wide when employed at the more rapidly curving ends, while any decoration involving concentric elliptical lines is extremely hard to arrange with any degree of satisfaction, since no two true elliptical curves can be completely parallel with one another, which renders the designer's task a hard one. Wren's mathematical tastes frequently led to his complicating a problem in order to have the pleasure of solving it, and these two churches are interesting examples of this tendency, which is more clearly shown in them than in any of his existing churches. The tower and spire of St. Antholin was among the finest of the simpler forms designed by the architect, and, with that of St. Mary Somerset, shows the use of a purely Gothic form, carried out with Renaissance detail. The church of St. Mary Somerset, which stood in Upper Thames-street at the south-east corner of Lambeth-hill, was built in 1695, but only the tower has been preserved.

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ARCHITECTURAL SOCIETIES.

The Birmingham Architectural Association : The Palace of Knossos, Crete.

The fifth general meeting was held at the Association's rooms on Friday, 7th inst., the Vice-President (Mr. W. A. Harvey) in the chair, when Mr. Theodore Fyfe, F.R.I.B.A., read a paper on the subject of "The Palace of Knossos, Crete," illustrated by numerous lantern slides.

The lecturer mentioned the fact that he had been present for a considerable time during the unearthing of the palace, so that the audience might know that the observations he was about to make had been acquired first hand and had not been procured from books. It was pointed out that although the discoveries in this particular place could not claim to have revealed much that was of great architectural value in themselves, nevertheless they did throw considerable light upon a somewhat hazy period in the history of architectural development. The period, roughly between 2000 and 1500 B.C., saw the rise and fall of the highest attainments in ancient Crete. There were abundant proofs that Crete, one of the "islands of the seas," was at one time subject to Egypt; but there was little of Egyptian influence to be found, clearly indicating that the peoples of Crete were sufficiently developed in themselves to possess quite a distinctive style of their own in matters of dress and arts and crafts. The discoveries of representations of natural objects in plaster, pottery and fresco showed an unconventionality and vitality which was truly surprising considering the early date at which they were executed. An almost humorous note was struck by some of the slides representing clothed female figures, in that, while viewing them, the imagination was almost tricked into fancying that one beheld modern illustrations of the "latest Paris fashions." An explanation was given and views placed upon the screen to illustrate the methods adopted for the excavation and preservation of the remains of the Palace of Knossos. The plans of this palace, and of others on the island, revealed some curious zig-zag, maze-like methods of planning. The basis of the wall construction was mainly of mud, which was, in many cases, lined, where exposed to the weather, with lime-stone slabs and internally with slabs of gypsum as a dado, with fresco pictures framed in wide borders of design on what might be termed the general eye-line. The mud walls were usually strengthened by built-in wooden posts and beams, while occasionally lime-stone blocks were used for the same purpose. Indications as to the general architecture of the period of the erection of the palace, apart from the remains, could be gathered from fresco representations and from the several delightful little porcelain models of houses which had been discovered.

A vote of thanks to the lecturer was proposed by Mr. Edwin F. Reynolds, seconded by Mr. E. E. Bateman, and supported by Messrs. W. Doubleday, W. Haywood, B. Walker, and the Chairman.

GENERAL NEWS.

Professional Announcement.

Mr. R. Stephen Ayling, F.R.I.B.A., has removed his offices from 8, Dartmouth-street, Westminster, S.W., to Bedford House, 8, York-place, Baker-street, W. His new telephone number is Mayfair 4522.

Appointment.

The Minister of Munitions has appointed Sir Howard Frank, head of the firm of Messrs. Knight, Frank, & Rutley, to be Hon. Adviser on Land Valuation to the Ministry.

The Royal Institute of British Architects.

The Council of the R.I.B.A. have decided to remit the subscriptions and contributions due on January 1, 1916, of all members and Licentiates serving with the Forces who make a written application for such remission before July 1, 1916.

A Shakespeare Tavern.

The "Three Pigeons" at Brentford market-place, an old Elizabethan inn, has been closed as redundant under order of the Middlesex licensing justices. It was the resort of the poets and dramatists of the Elizabethan era.

Admission to Kew Gardens.

Concrete foundations have been prepared at all the gates at Kew Gardens, and some of the turnstiles have been placed in position. When the work is completed the charges for admission will come into force.

St. Margaret's Chapel, Edinburgh.

In connection with the provision of new stained glass windows for St. Margaret's Chapel, Edinburgh Castle, Mr. Douglas Strachan, the artist in stained glass, offered to replace the five windows in the chapel. The one condition he laid down was that the Cockburn Association should present £36, the cost of three of the windows, to some war fund.

Housing Problem at Rhos.

At Wrexham Rural District Council recently it was reported that the first group of houses built by the Council for the working classes at Rhos are ready for occupation. Seventy-five applications were received for twenty-two houses, but after the Council had fixed the weekly rent at 5s., plus rates (7s. 5d. inclusive), most of the prospective tenants withdrew.

A New Calendar.

The Val de Travers Asphalte Paving Company, Ltd., Hamilton House, Bishopsgate, E.C., have sent us an artistic little almanac in bronze metal-work. It is an effective production, and includes a perpetual calendar printed in plain figures.

Building Operations in Nottingham.

Five hundred and eighteen new buildings, including dwelling-houses, of which 155 were certified for occupation, have been erected in Nottingham in 1915. Amongst them have been six public buildings and half a dozen warehouses and factories. Ten other big buildings are now in course of erection.

London Water.

Attention was called at the meeting of the Metropolitan Water Board on the 7th inst. to the fact that the number of "first class" samples from the New River had fallen to 22 per cent. It was explained that the reason was the deterioration of the raw New River water, and the absence of adequate storage. The provision of adequate storage accommodation was engaging the attention of the Chief Engineer.

Safety of St. Paul's.

The appeal for the fund to strengthen the dome supports of St. Paul's Cathedral is being renewed. At least one of the massive piers supporting the dome shows alarming tendencies, it is stated, and work which has already been begun on it has revealed signs of internal crumbling. The danger is described by Canon Alexander as being caused by "senile decay, accelerated by the gradual pressure of the dome, the rusting of iron, and internal degeneracy of the extremely inadequate repairs executed at some earlier period."

Destruction by the German Army in Belgium.

The *Times* correspondent in Paris has communicated the following to that journal:—The Belgian Government has compiled statistics as to the destruction wrought by the German Army in Belgium. The total number of houses and public buildings destroyed is 18,207, and details with regard to Flanders, Limburg, Hainhault, and Luxemburg are lacking. The destruction was most complete at Spontin, where 127 out of 130 houses were burnt to the ground, and at Dinant 1,263 out of 1,375. At Louvain, 1,120 out of 7,433 houses were destroyed, while 1,000 houses were pillaged.

Houses Wanted for Workmen.

At their meeting on the 6th inst. the Highways Committee of the Goole Urban District Council had before them a letter from the Elswick Works, Newcastle-on-Tyne, asking, in connection with the building operations at Barlow, near Selby, if there were any prospects of housing from 100 to 200 skilled workmen in six to eight months' time. The Committee decided to reply, stating that at present there were a large number of vacant houses in the town, and also that they had forwarded the information to the local builders.

Trade after the War.

A Guildhall meeting, called by the Lord Mayor of London to consider the question of "Trade and Employment after the War," is to be held on Monday, January 31, at three o'clock. The Lord Mayor will preside. The meeting has been promoted jointly by the London Chamber of Commerce and the National Patriotic Association, both of which bodies have for many months been considering the industrial and commercial problems which will arise when the war is over. The Lord Mayor is anxious that the meeting shall be thoroughly representative, and he invites the co-operation of the Chambers of Commerce, patriotic bodies, employers' federations, trade organisations, banks, railway companies, etc., in all parts of the country. Inquiries may be addressed to the Hon. Secretaries, Patriotic Meeting, Mansion House, London, E.C.

Fire Losses in 1915.

Fires in the United Kingdom during December were far more costly than in any previous month of the year, largely owing to a number of serious outbreaks during the last few days of the month. Taking into account only fires in which the damage amounted to £1,000 or more, the total cost of the fires during December may be put at £633,000, which compares with losses of £365,000 in November last and £353,000 in December of 1914. On the same basis, the total cost of the principal fires in the United Kingdom during 1915 amounted to £4,207,100 as against losses of £3,745,100 in 1914 and £3,630,400 in 1913. A feature of the experience last year was a number of fires in factories engaged on Government work of various kinds.

Aberdeen Building Trade.

The statistics as to the extent of building in Aberdeen during the past twelve months, for the period from December 1, 1914, to November 30, 1915, show a considerable decrease both in value and the number of plans. The total value of the new buildings, alterations, and additions sanctioned during the year by the Plans Committee of the Aberdeen Town Council was £57,683, as compared with £101,912 in 1914—a decrease of £44,229. The total, which is little more than half of last year's aggregate, includes £15,825 on dwelling-houses, £12,550 on factories and workshops, £6,355 on shops, offices, warehouses, and other business premises, and £21,872 on additions and alterations to buildings. The number of new buildings erected, and additions and alterations carried out was 174, as against 214 in 1914.

National Building Code for Scotland.

An important piece of constructive work in the direction of creating conditions favourable to the resumption and expansion of trade after the war has been achieved by the establishment of a national building code for Scotland. The object of the code, which has just been published by the Stationery Office, is to ensure uniformity of practice in entering into and carrying out building works, from the preparation of the schedules of quantities on which the contractors' tender is based to the payment of the final balance. It is doubtful if anything quite so ambitious in regard to building has been previously attempted on a national scale, and Scotland is believed to be the first country in which it has been done. Up to the present practices have been widely divergent, Edinburgh, Glasgow, Dundee, and Aberdeen each having its own local rules and customs, a state of affairs which has given rise to much confusion on the part of building owners and contractors who conduct business in all of these cities.—*Scotsman.*

The Building Trade in Leeds.

The building trade in Leeds has found itself in the position of many other industries during the past year. While the ordinary branches of building activity have been much restricted from financial considerations, builders on the whole have experienced some compensation from the abnormal erection and extension of engineering works for the purpose of augmenting and accelerating the supply of munitions. The value of building work done in the city is almost up to that of the previous year, though the number of dwellings erected maintains the appreciable shrinkage which has set in since the war began. It is the speculative builder who has suffered the brunt of the burden, for he has had to face not only an increased cost of material and labour, but has had to contend against a largely increased rate of interest on borrowed money, circumstances which have conspired to cripple his business. The estimated value of buildings shown on plans approved by the Corporation for the years ended November 30 was £445,844, as compared with £459,908.

"Mechanical World" Year-Books.

We have received from Messrs. Emmott & Co., Ltd., 65, King-street, Manchester, copies of the *Mechanical World* Pocket Diary and Year-Book and the *Mechanical World* Electrical Pocket-Book for 1916. In the first-mentioned publication the publishers have introduced various new features in this, the twenty-ninth issue of a very useful little book. The section on steam boilers has been largely re-written and much additional information introduced, including particulars of boiler scantlings, the requirements as to boiler mountings, etc. Among the new features of the present issue of the Electrical Pocket-Book is a lengthy section on switch gears and switch boards. The section on lighting circuits and switching has been revised and additional illustrations introduced. Both these handbooks are published at 6d. net each.

Renumbering Specifications on Publication.

We have received from Mr. W. Temple Franks, Comptroller-General, the following notices, which will appear in the *Illustrated Official Journal* (*Patents*) of January 12:—In order to give the public the advantage of having abridgments of specifications up to date while retaining their numerical sequence, applications for patents made subsequent to 1915 will be given new numbers when their complete specifications are accepted or become open to public inspection before acceptance. The new numbers will start with No. 100,001 (without any indication of date), and will supersede the original application numbers in all proceedings after acceptance of the complete specifications. It is intended in future to issue abridgments of specifications in the *Journal* a few weeks later than that in which their acceptance or publication is advertised, so that they will be available for search purposes soon after the printed copies of the specifications are on sale; but, until the system is fully in force, they will only be issued when there are sufficient to make up a full sheet of sixteen pages. The present series of abridgments will run concurrently with the new series in the *Journal* until April, 1917, when it will be entirely superseded.

CORRESPONDENCE.

Architects and Munitions of War.

SIR,—The Royal Institute has been informed by the Ministry of Munitions that there is a serious deficiency in the supply of skilled men for work in munition factories, and that this deficiency is particularly marked in respect of tool-setters. The demand for such skilled workers is altogether greater than the supply at the present time; consequently it is imperative that suitable men should be trained at once for the extremely accurate work of setting up automatic and semi-automatic tools. It is necessary to train men for this purpose to a very high degree of accuracy. In the case of the manufacture of machine-guns the limits are in the neighbourhood of one ten-thousandth part of an inch.

The experience gained from the professional men who are already assisting in this work proves that the most suitable men to be trained are of the more highly educated type. Arrangements have accordingly been made by the Ministry of Munitions for training men of this type. Such men will be given a course of training lasting two or three weeks, during which they will be paid £2 a week, and they will then be drafted straight into factories where they are most urgently required, and where they will be paid the standard rate of wages for the district for tool-setters. This rate varies from £3 10s. a week to £5, according to the district.

The Selection Committee of the Architects' War Committee have been informed of this need and have the matter before them in connection with the War Service Forms of those architects who are over military age or unfit for military service.

ERNEST NEWTON,
President R.I.B.A., Chairman Architects' War Committee.

Factory and Commercial Property Sales, 1915.

SIR,—On the year under review we are pleased to report that the sales and letting of factory property, wharves, land, etc., show far better results than was the case in 1914. This result is in a large measure due to the war, which has produced a great demand for factories and commercial property of all descriptions.

As we anticipated in the early stages of the conflict, a demand would be created for factories, due primarily to the requirements of the Government for the manufacture of the necessary war equipment for our fighting forces, and, secondly, for the manufacture in this country of goods previously imported.

We are glad to say this forecast has been realised, and the nation's immediate wants have necessarily demanded extra pressure of manufacture, which created a necessity for the opening up of factories as well as the extension of present ones to cope with the enormous requirements of the country. We are able to report that we have disposed of a large number of factories with and without plant and machinery, at figures running into many thousands of pounds, and that an unprecedented demand still exists for properties of all kinds.

Premises that previous to the war had failed to find tenants for years have been rapidly taken up, owners in many cases having obtained, through competition, increased prices to those asked.

It is interesting to record, on analysing the demand for factories, that many have been disposed of to the Government, Government contractors in all branches of manufacture, English firms starting to manufacture goods previously imported (now barred through the war), and Belgian manufacturers who largely exported goods to this country, but prevented from doing so now owing to their works having been destroyed by the Germans.

To say the Industrial World of England is busy is a mild term to use; it is in the throes of a boom, and so far as one can judge is likely to be for some years to come.

The declaration of peace should mean the opening up by our manufacturers of an enormous overseas trade with our Colonies, new possessions, and the world's markets in general, and then will come the time for us to "capture the trade" hitherto to a large extent held by the Germans.

We can safely say the outlook for further deals in factory property is good, and think we are justified in hoping to report a continuance of the demand and supply of commercial properties of all descriptions in the present year, not only for the purposes of occupation by manufacturers, but as investment by trustees and others seeking a good, sound, improving security.

LEOPOLD FARMER & SONS.

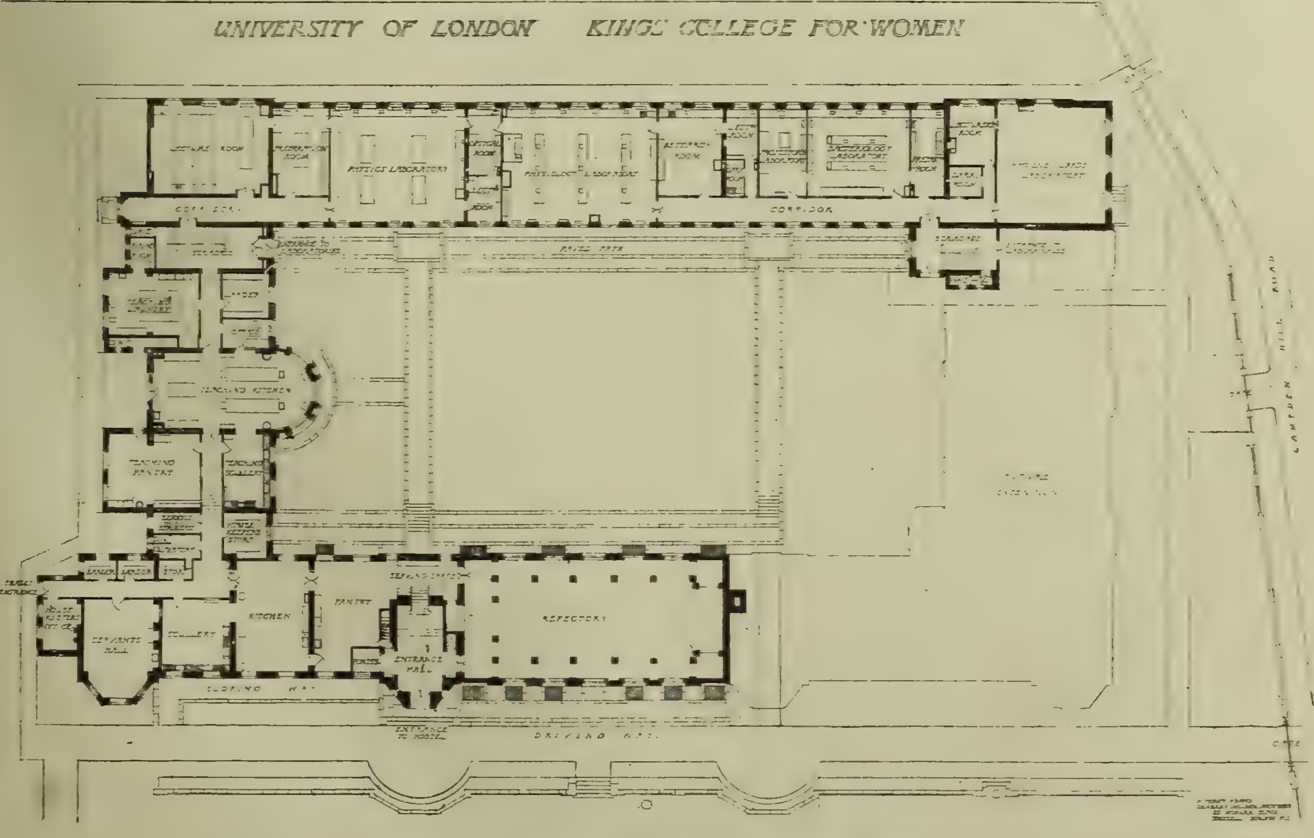
◆

MEMORIAL TABLET, FALMOUTH.

The Royal British Colonial Society of Artists have erected a tablet in the Church of King Charles the Martyr, at Falmouth, to the memory of Mr. William Ayerst Ingram, founder and for twenty-six years president of the society. The memorial is the work of Mr. Alfred Drury, R.A.

HOME-GROWN TIMBER AND REQUIREMENTS OF THE GOVERNMENT COMMITTEE.

The Home-grown Timber Committee have received a large number of offers of timber. Any lots which are *prima facie* suitable for the Committee's purposes will be inspected as soon as the pressure upon the staff will permit. Meanwhile (says an official statement) it may be of service to landowners, agents, and others to know that the classes of growing timber at present principally required are:—Acots and Corsican pine, silver fir, Douglas fir, and larch of good dimensions, and in lots of about 20,000 cubic ft. and upwards. Plantation ash of fair size, which will be accepted in comparatively small lots. Other hardwoods of good dimensions are also required; but, as a rule, these cannot be considered in small lots. The Committee are also prepared to enter into arrangements with the owners of estate sawmills for the conversion of timber. The Committee would be glad to be informed of sawmill plant that is idle or not fully employed, in order that, if possible, arrangements may be made for increased output. All communications should be addressed to the Secretary, Home-grown Timber Committee, Craven House, Northumberland-avenue, London.



University of London: King's College for Women.

Messrs. H. Percy Adams and Charles Holden, Architects. (*See page* 50.)

Leading Contents.

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ILLUSTRATIONS.

Architecture by Bernini.

THESE illustrations are given in connection with an article appearing on page 44.

St. Benet Fink and St. Antholin.

WE reproduce two interesting plates from "The Churches of Sir Christopher Wren," by J. Clayton, which was published by Messrs. Longmans, Green, Brown, & Longman in 1848, and which we give by the courtesy of Messrs. Longmans, Green, & Co. The two churches are dealt with in our article on page 47.

London University: King's College for Women.

THE new buildings stand in grounds of nearly 3 acres on Campden-hill, and situated between Holland Park and Kensington-gardens. The new establishment owes its origin to the introduction of special courses in Household and Social Science in October, 1908, at King's College for Women, then situated in Kensington-square. These courses were instituted with a view to providing education in science and economics of a university standard, and applying the principles thus taught to the management of the home, the hygienic and businesslike conduct of public institutions, and the employment of women in factories and workshops. The introduction of a Domestic Science course into a university, though looked upon by some as a revolutionary step, is no more so than was the inclusion of Agricultural and Engineering courses into the curriculum for men—an innovation that everyone now admits was justified. The movement has received much encouragement, including the practical interest of the Queen and generous contributions amounting to over £100,000.

The buildings already completed comprise Queen Mary's Hostel, the Refectory, and the Anglesey Laboratories. The Hostel was presented by Sir Richard Garton, and received its present name by permission of Her Majesty. The Laboratories were the gift of Lord Anglesey, and the Refectory was provided by Mrs. Wharrie, who has also contributed largely to the endowment of the College.

The buildings are grouped round a quadrangle, which will be completed in the future by the library and official quarters. They are designed on the lines of late Georgian work, with brickwork of a beautiful colour and texture for the facings, and Portland stone dressings concentrated on the principal features of the buildings.

For the complete training of students in Household and Social Science a residence near the Laboratories is essential in order that there may be adequate opportunities for the practical application of the principles and processes studied. There are sixty bed-sitting-rooms, and separate dressing-rooms for each student, rooms for the Warden, common rooms for staff and students, isolation-rooms, and administrative offices in the residential part of the Hostel, and educational facilities are provided by a large kitchen, pantry, and laundry, equipped with modern appliances for practising the domestic arts, and adapted to the needs of large institutions and small homes; a kitchen laboratory is provided in an adjacent building, and easily accessible from the Hostel; and also in the Laboratory block are accommodated the following departments:—Physics, Physiology, Bacteriology, Hygiene, Chemistry, Biology, Psychology, with the necessary rooms for lectures, preparation, and teaching staff.

The new buildings were designed by Messrs. H. Percy Adams, F.R.I.B.A., and Charles Holden, A.R.I.B.A., architects. The general contractors were Messrs. Wallis & Sons, of Maidstone, who also carried out the ferro-concrete construction from details by Messrs. Mouchel & Partners. The Laboratory fittings were made by Messrs. Baird & Tatlock from the architects' designs. Messrs. Doulton did the plumbing and drainage. The entrance gates and head vases were made by Messrs. Elsley, and all the stone carving was carried out by Mr. Broadbent and lettering by Mr. Eric Gill.

MEETINGS.

MONDAY, JANUARY 17.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher on "Renaissance Architecture." 4.30 p.m.

WEDNESDAY, JANUARY 19.

Royal Society of Arts.—Mr. Lawrence W. Chubb on "The Common Lands of London—The Story of their Preservation." 4.30 p.m.

Concrete Institute.—Ordinary general meeting. 5.30 p.m.

THURSDAY, JANUARY 20.

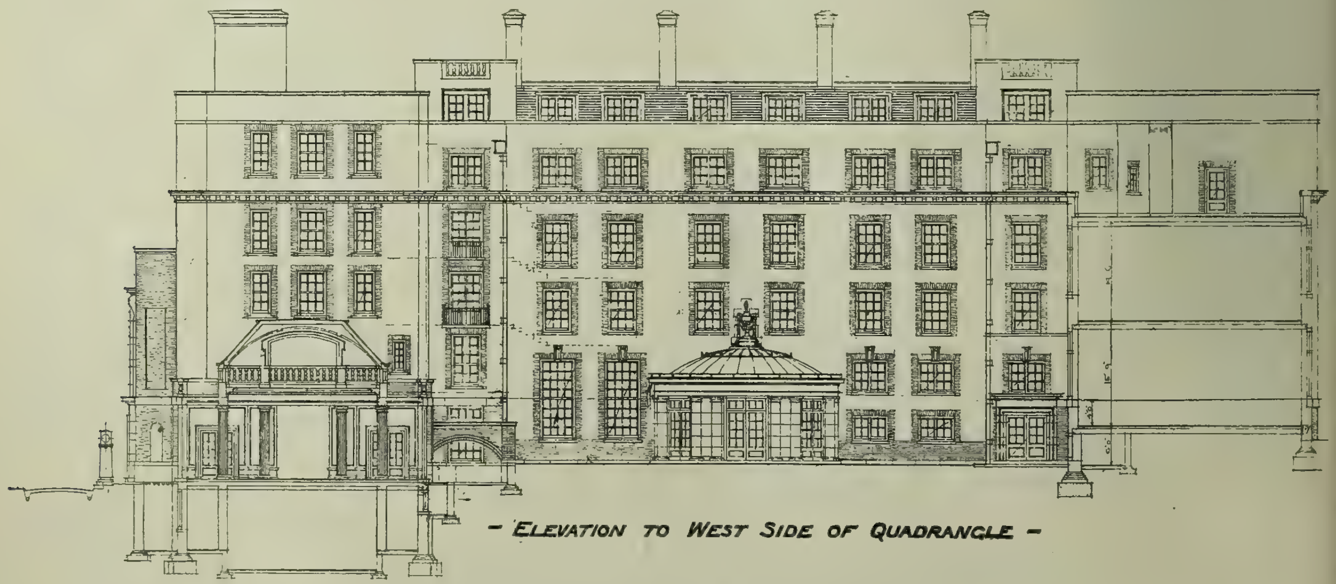
University Extension Lecture (at the British Museum).—Mr. Banister Fletcher on "The Roman Forum." 4.30 p.m.

FIFTY YEARS AGO.

Midland Railway: St. Pancras Station Competition.

OUR readers know that eleven invited architects submitted designs for the proposed new station. The following award has been made:—To Mr. G. G. Scott, R.A., the erection of the building; Mr. G. S. Clarke, premium £200; Mr. E. M. Barry, £100; Mr. T. C. Sorby, £50. The other competitors were:—Messrs. C. P. Cockerell, Darbishire, Lockwood & Mawson, Hine & Evans, Walters & Co., Lloyd, and Owen Jones. The cost of the selected design is estimated at about £280,000.

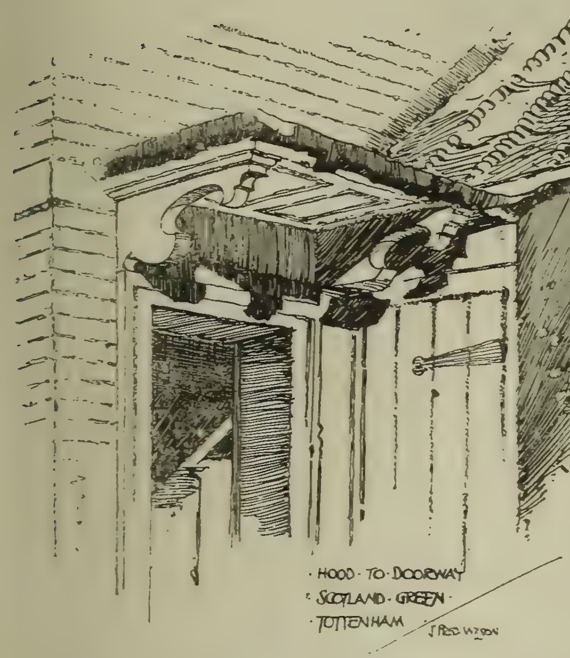
[⁂ We give the above extract from the *Builder* of January 13, 1866.—ED.]

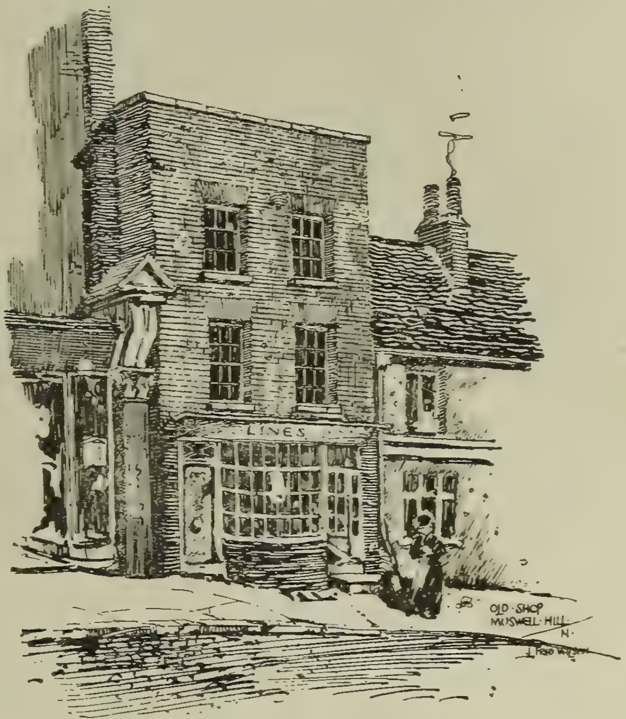


University of London: King's College for Women.

Messrs. H. Percy Adams and Charles Holden, Architects.

CIVIC DESIGN SECTION.





Hood to Doorway, Scotland Green, Tottenham, N. **Old Post Office and General Store, Muswell Hill, N.**

From sketches by Mr. J. Fred Wilson.

NOTES AND SKETCHES FROM LONDON VILLAGES:

CHRISTMAS DAY.

IN former times, when the country was less timid in its approach to meet the City, London boasted a chain of rural villages within the six-mile radius. To these suburban retreats—north, east, south, and west—the wealthy City merchant nightly repaired, by chaise, by curricle, by hackney coach, or trusty quadruped, there to enjoy the delights of sweet air and pleasant surroundings. A century ago such places were at their zenith of charm; in Queen Victoria's time the railways welded them to the iron heart of London, and during the last twenty years electric trams, omnibuses, and other improvements have almost obliterated their setting. Yet sufficient of their beauty remains to-day to charm and enlighten the student of history. During the Christmas holidays I made pilgrimage to several centres of eighteenth-century life, trudging through the mud and braving the elements in cheerful quest. Once again in spirit I kept company with Samuel Pepys, creeping unobserved into the spacious coach-and-six which drew him up Highgate-hill to Lauderdale House, adjoining Andrew Marvell's cottage. All the way from London Pepys gossiped of the Dutch menace and the varying success of our fleet under the Duke of Albemarle. Arrived at Highgate, the loquacious secretary vanished into the house and left me standing outside, speculating on the early nineteenth-century additions, which appeared to me as a page from Krafft's book. Pensively I turned to search for Marvell's cottage and groped along the brick wall to find an entrance; alas, nothing remained except the stone threshold bedded deep in the wall! Then my thoughts turned to Cromwell House, opposite, with its cheery waistcoat of seventeenth-century red brick, wrought architraves, and generous cornices. From beneath that archway at the side General Ireton's men have marched, and the old house is quite in accord with the present troublous times, for men at arms are ready on every newel post. Highgate is indeed a place of happy memories. Once on a Christmas-time, when the snow was deep, Bacon stopped his coach on the way to St. Albans to stuff a fowl with snow, and to observe the effects of its preservative qualities. Here he caught a fatal chill. Washington Irving walked these classic ways to visit Coleridge at Highgate. Charles Dickens reverenced every brick of the place. I continued my quest to West-hill. Ah, the spirit of the past surely haunts this favoured spot! There is Holly-terrace, built for Mr. Coutts, the banker, and just below is the famous Holly Lodge, with the elegant conservatory designed by John Papworth. Back once more, through Highgate village, past old inns and wrought-iron signs, peeping at coach-yards long deserted of their former traffic, through Hornsey-lane to see Nash's viaduct, and to experience a sense of chagrin when the iron bridge of single span was reached. I remembered a former Christmas visit to this archway thirty years ago, when workmen were busily demolishing the low stone balustrade to prevent the suicidal tendencies of the community, and to erect in its place a wrought-iron grille through which one peered down into the abyss of the cutting and over the spires of London.

Regretfully Highgate was abandoned; no jovial Boniface awaited travellers at the Gate House Tavern to swear them on the Horns; no blacksmith's hammer rang out merrily from Highgate Forge. Whither? I ruminated, then fancy prompted Muswell-hill. Yes, the rendezvous of the fraternity of St. John of Jerusalem, that must be visited of a certainty. Perhaps I shall see the dairy and farm of the Clerkenwell Templars, or view the Nuns' Chapel, with the image of our Lady of Muswell. There is also a possibility of my inspecting the six old-world residences which I remarked on thirty years ago. Thoughtfully I wended my way through acres of small villas, skirted the leafless woods, and then along paved streets to the historic Pursenhall-hill. The once familiar landmarks had entirely vanished; the old-world mansions had gone into the limbo with the rest. Where, I inquired of an old inhabitant, can I find the Elms, the Limes, Summerlands, Hillside, the Firs, and the Oaks? "Ah, sir," he replied, "they now form part of the foundations of the buildings hereabouts, and their grounds are covered with a hundred shops!" Then my attention was directed to a charming little brick box of late eighteenth-century date. "What building is that?" I ventured. "We have a great affection for that building," my guide replied. "Fifty years ago it was the only trading place in the village—a general store and post-office combined; and it is now an ironmonger's, although in the hands of the same family." How typical of their age these unpretentious shops are, replete with bow fronts and fanlights, with glazing bars undisturbed by fashion, and that air of refined simplicity; and what a contrast in style to the adjacent shop, whose consoles alone would fill the diminutive first-floor room! Proportion was the keynote of that age, and reasonable height to width of front. Eight feet for the shop in the clear, 9 ft. for the importance of the first floor, and 8 ft. for the bedroom above. Those who had the framing of building regulations, let us hope, unwittingly changed the whole order of scale in small buildings for the worse, and banished for ever that attribute of human proportion which the eye of an artist relishes.

The morning was yet young, and other villages beckoned me on. Hornsey I knew to be devastated by waterworks and railway tracks, Wood Green to be so in name only. Enfield, Southgate, and Barnet were too far afield for my purpose, but in the distant acreage of bricks and mortar I singled out Tottenham, and pursued my way to it through streets intersected with tramlines and electric light standards, and came at last to Scotland Green (see sketch). Tottenham has ever been a great place for antiquaries, a reputation shared with Clapton. This is Charles Lamb's district as much as Mackery End, in Hertford-

Scotland Green, Tottenham, N.
From a sketch by Mr. J. Fred Wilson.

shire. In one of these houses George Eliot stayed. Along this highway John Gilpin galloped past Edmonton to Ware and back again to London. Along this same Ermine-street the Roman legions marched eighteen centuries ago, and for hundreds of years statesmen, scholars, and peasantry journeyed between Cambridge and London. The very brick houses, strung out in isolated solemnity from Stoke Newington to Royston, bear a family likeness and sport the same brick livery. In the front of Scotland Green—appropriate name to the direction of the great road—there stands a building formerly known as the Blue School, where in old times girls were educated without charge. It is now a school for middle-class pupils, and the charges have correspondingly increased. Near by stood the Watch House, the prisoners' cage, and the house of John Fowler, the parish beadle, who was responsible for the custody of unruly human birds. At times the honest guardian found his hands full, and was forced to send to London for an additional constable. Many old cottages are still *in situ* on Scotland Green. They are distinguished by strange names. For example, Ward's-alley, Tubbey's-alley, Stack-yard, etc. At this point the Moselle crosses the High-road and empties into the Carbuncle Ditch, from thence to swell the waters of the Lea, and so to the Thames. The old Blue Coat School, built in 1735, and endowed with £360 in small benefactions, was rebuilt in 1833. Tottenham offered many other attractions to my imagination; there was so much to be seen, so many things to record, but I resolved to devote future leisure to the study. I had not the courage to explore Walthamstow, which even thirty years ago was a pleasant place, and I knew that the old house which once afforded me shelter as a boy, and the wonderful fruit garden, with its interminable walks, ending in a path to the Forest, no longer existed. Yet the call of the open road was upon me, and by devious ways I tramped through Lea Bridge to the Pond at Snaresbrook, and by the mushroom suburb of Ilford to Romford, which was reached just as the light failed; but my journey was not altogether fruitless, for in the London-road I found buildings of the time of Elizabeth standing in neighbourly humour with youngsters which first saw the sun when Queen Anne ruled her mighty dominions. Had the day been longer I should have found time to explore Chigwell and Brentwood, for enthusiasm waxed within me. But stay, to-morrow will dawn, and then who knows what discoveries will be made? Within two hours I was back at Hampstead, which place has always been thought the chief as well as the most salubrious of London's villages.

BOXING DAY.

Hampstead looked the picture of English charm under the spell of December; it has not suffered in the way of other London retreats. It has been enlarged in all directions, but its old streets are still distinctive as they thread their way through a maze of Victorian houses. It is attached to Hendon on the north and to Cricklewood and Kilburn on the west; it does not recognise the encroachments of Kentish Town or the lordly terraces of Regent's Park. Early in the morning I started my investigations, beginning in John-street, now Keats-grove, with a glimpse at the villa where Keats lived before his last journey to Rome. Hereabouts the early nineteenth-century development of Hampstead is evidenced. There are stuccoed villas, with dainty windows and elegant ironwork, trellis verandahs and covered entrance ways. Heath-street and High-street boast many survivals of the Georgian era, both early and late. Church-row and Flitcroft's steeple stand benign. Frognal still savours of quasi-Gothic taste. Near the Flask is the weather-boarded house and studio, built cheaply in the last years of the eighteenth century for Romney, whom competition crowded out of fashionable London. This I thought to be a fit place to explore, and having gained an entrance, examined the hall, ascended the easy geometrical staircase, and, entered the painter's lofty studio between the wide folding doors. This room suggests nothing more than an assembly-room such as one encounters in a country town. There are the same tall sashed windows, the balcony for musicians, approached by a secret stair in a cupboard, and the same atmosphere of desolation. From a door in this room one catches a glimpse of a large apartment beyond. The Spartan simplicity of the room, its gigantic scale, the delicacy of the beaded architraves and cornice, the entire absence of decoration are in accordance with Romney's last years. How I should have liked to hang the walls with the master's pictures, to swing a candelabra from the centre of the ceiling, to press some willing musicians into the gallery, and then to people the room with the costumes and sparkle of the time! This house is appropriate to the purposes of a Romney museum, yet I doubt if the good folk in the neighbouring houses ever give it a thought or take the trouble to pull the bell and gain admittance. The Spaniards Promenade and Jack Straw's Castle were thronged with happy people, much as has been the case for a century. My Lord Mansfield's House, objective of Gordon rioters, stands within its classic grove of trees, and to the north the square stump of Barnet Church sharply punctuates the landscape, but all these delights must be left for another day.

How I should enjoy a walk to Hendon in the tracks of Bill Sikes and his dog, but Golder's Green is a formidable barrier and has little attraction for me! Shall I go on to Harrow, through Cricklewood, and visit the farm between the Finchley and Edgware roads, or shall I betake my steps to Richmond and Hampton Court? Any of these directions hold potential charms, but, halt! I am due to sup with friends at Mortlake this evening, and long tramps are out of the question. I decide for Mortlake, and, taking train to Kew from Hampstead Station, reach the historic gardens just as evening falls. "Mortlake, sir?" said a happy lamplighter whom I encountered outside Kew Station, balancing himself in the gale at the top of a ladder. "The best way to the 'village' is to walk across the meadows to the High-street; it is about twenty minutes away." I took his advice and made my way beneath dangerous elm-trees, and by spacious old mansions standing alone amidst bleak fields, and came unexpectedly upon the Thames in full flood. Earlier in the day I had entertained thoughts of chartering a boat at Kew and approaching my friend's house by water, climbing his garden wall, and entering by way of the lawn. The angry face of the Thames rebuked me, and I was thankful for the safety of the meadow path. Lights gleamed in the distance, barges rocked sullenly at the wharves, the tall chimney of the brewery at the end of the High-street seemed to rock to the gale. It was a fitting entry to the village of the dead lake, a sombre tapestry rivalling those for which this village was famous when William of Orange kept court at Hampton. In Mortlake I chanced upon the true atmosphere of the London village of the eighteenth century. Old-world houses gave friendly shelter to the passenger, flickering lights deeply recessed behind sashed shop-fronts called attention to seasonable wares. The cupola crowning the tower of Mortlake Church peered down on me in friendly recognition. I was nearing a tangible welcome. My architect friend's house at last! I approached through a paved court and gained the entrance hall with the family portraits—Romney's studio again, but this time full of merry people, some in Georgian costume. A real hanging candelabra, with superfine wax wicks sparkling from every sconce; a perfect forest of greenery, holly and mistletoe included, decking picture frames and other vantage-points. Dances, charades, supper in a dining-room one reads about but seldom sees. A sketch in costume without a plot, arranged by two artist friends, giving the interior of Sir Joshua Reynolds's studio in Leicester Fields, on the occasion of a visit to the painter from Sir William Chambers, while the Duchess of Devonshire was sitting. The latter scene realistic and scholarly even to the small talk and scandal in which her Grace joined concerning the importance of keeping the Royal Academy select and the necessity of keeping interlopers outside its mystic gates. Thus the evening passed in congenial society. My host had some soldiers of the London Scottish billeted upon him, and they were the lions of the revels. It was truly the most interesting and delightful experience of my years. Yet it was not until I put these thoughts on paper that I appreciated how much my walks abroad during the previous days had helped me to enjoy the hospitality, and it is now I realise that architecture and the kindred arts subtly influence our existence.

THE STATE AND HOUSING.

A MEETING of the Scottish National Conference on Housing was opened in Glasgow on the 3rd inst. in the hall of the Scottish Co-operative Wholesale Society in Clarence-street, under the auspices of the Glasgow Labour Party Housing Committee, and was attended by 786 delegates representing 362 trade unions, co-operative societies, guilds, and other bodies. Mr. William Gallacher, director of the Scottish Co-operative Wholesale Society, presided.

The Chairman said the war had raised many new issues, but one of the old issues, the housing question, had been raised in a most acute form. Private enterprise had failed, because they provided houses not so much for the people to live in as because investment in houses yielded good dividends. The day of private enterprise was over so far as housing was concerned. Housing had become a great national and civic question. The question of interest was the great bugbear to housing reform. The State must advance money and municipalities must administer it. It must be cheap money—money free of interest altogether—if the housing question in this country was to be solved. If money could be found for the war it must be found for housing.

Dr. A. K. Chalmers, Medical Officer of Health for the city of Glasgow, read a paper on "Housing and Health." He said that one-fifth of the dwellings in the city were one-roomed houses and that 13 per cent. of the population occupied them. Diagrams were shown to illustrate the density of population in the various districts of the city. Incidentally, he remarked that the building of houses one on the top of another was the cause of dear land—the best way to cut down the price of land was to cut down the height of the houses. In every single-apartment house in Glasgow there were more than three people—the number of persons per room was greater the smaller the house was, and that had an effect on the death-rate. In one-roomed houses in Glasgow the male vanished after he reached the age of thirty-five and was found in institutions. It was a fallacy that the one-roomed house was necessary for the old men and old women. The old men did not reside there. What had been found by investigation was what they had not expected to find, and that was the enormous excess of child-life in one-roomed houses. That was one of the reasons why they should consider whether the one-apartment house should not be abolished. Statistics were given to show that the children in one-apartment dwellings were less in height and weight and mental capacity than those reared in larger houses, and Dr. Chalmers characterised the shrinkage represented by the figures as a social injustice. Discussing the question of reform, he said they required an authority that could take a wide view over a large area, such, for instance, as the industrial area of the Clyde. The problem of housing on Clydeside was one affecting the workers not of one town only but in the whole area, which was mutually interdependent.

Councillor John Wheatley read a paper on "The Housing Problem: Other People's Remedies and Ours." He said the alarming development of the housing problem had brought them within reasonable reach of a house famine. In every part of the country they had the same story. Private enterprise had withdrawn for the time being from the building of working-class houses. The present scarcity of houses was primarily due to the growth of combines among manufacturers and merchants of building material. There was no local authority in Scotland that was facing as it ought to do this terrible national problem. To tackle it successfully they must build large numbers of healthy houses, and such a building scheme must not be left in the hands of private enterprise. In the plan of the new Scotland for which they were agitating the smallest house would be one of three apartments and a bathroom. The three and four story dwelling had to go. The scheme of the Glasgow Labour Party was to have houses of the cottage type of three apartments and a bathroom. To pay interest of 3½ per cent. on such a scheme they would require a rent of £19 10s. If they could abolish that 3½ per cent. the rent would be £9 14s. They desired to put forward a scheme that would link up every district in Scotland. The capitalist who would lend money without interest did not exist, but the Government could do it. He explained his scheme of securing from the Government money free of interest with which to erect houses of a yearly rental of £9 14s. A certain number of houses would be erected each year, and at the end of sixty-one years the revenue from rent would be sufficient to carry on the scheme without further grants. A Government grant spread over sixty-one years of £2,500,000 per year would enable them to lay out a new Scotland on a new basis. That was only the cost of the war for half a day.

Mr. R. W. Horne, A.R.I.B.A. (City Engineer's Department), read a paper on "Town Planning and Housing."

Buildings in London-Road, Romford, E.

From a sketch by Mr. J. Fred Wilson. (*See page* 51.)

SHORTAGE OF HOUSES.

The Manchester Tenants' Defence Association proposes to agitate for a remedy for the house famine and to stir up a national agitation, so that the Treasury may be induced to remove the prohibition upon municipal building schemes. The first step will probably be to send a deputation to make representations to the Manchester Sanitary Committee. There is said to be a very considerable shortage of houses in the city. For a few years past speculative building has been on the decline, and the war has almost completely stopped the erection of cottage property. At the same time the Treasury has, for reasons of national economy, put a veto on municipal building, and in the case of Manchester this veto has prevented the carrying out of schemes which the Council had already approved. These municipal projects were not on a scale large enough to provide anything like a remedy for the shortage of houses, but they would have done something, and the leading minds in the Tenants' Defence Association feel the necessity for getting the corporations to begin to tackle the problem, however inadequate their first measures may be. It is represented that, at all events for some years to come, there will be no private enterprise in the building of artisans' houses, and that, as the need for more houses steadily grows, the Corporation must build in the interests of the comfort and health of the community.

The number of new houses built in Manchester in the twelve months ending last October was 410, but 200 of them were in Withington, which is very far from being a working-class district. The average number of the new houses built in the five years 1906 to 1910 was 2,400. Then a decline began. In 1911 the number was 1,578; in 1912 it was 1,072; in 1913, 997; and in 1914, 714. In October last the Sanitary Committee took a census of empty houses rented at 8s. 6d. a week or less, and found 348 in the whole of Manchester, which includes all temporarily vacant pending the arrival of the new tenants. In the districts of Harpurhey, Blackley, Moston, and Cheetham not a single house at 8s. 6d. a week or below was empty.

CIVIC REVIEW NOTES.

Woolwich Housing. Woolwich is in the throes of a house famine. There is, it is said, no single house in the borough or district rented at under £50 to let. People advertise offering premiums to those who find them houses. Small houses can be bought, but the mere purchase does not always give the buyers possession. At the commencement of the war the 13,000 Arsenal workers quickly increased in number, and at least 20,000 to 30,000 workers now want homes close to the Arsenal; while Plumstead, Abbey Wood, Charlton, and Westcombe Park have filled up. A deputation from the Borough Council waited on the Local Government Board in December, 1914, to ask that something should be done, and private enterprise was indisposed to meet what was likely to be a temporary demand. The fluctuations of population have been very marked, depending on the policy of the Government for the time being. In the year preceding the Boer War 15,293 men were employed at the Ordnance works, while during the war a maximum of 27,000 was reached. The establishment was reduced to a minimum of 8,400 in 1908, and Woolwich was almost brought to temporary ruin. Under the large Government scheme 1,200 houses have been built on one estate alone, and large numbers of huts and other premises are also being built; but this has not solved the difficulty, which may have to be met by giving special travelling facilities. One of the problems after the war will be to promote other industries in districts where the population has largely increased because of the special circumstances of war, otherwise the cost of the accommodation provided in the present will prove to be a white elephant.

Warley Town-Planning Scheme. At Oldbury District Council a Report was presented upon the new street by-laws which will be applicable in connection with the Warley Town-Planning scheme. The Surveyor stated that the present by-laws for new streets required a uniform width of 42 ft. Under the town-planning scheme the main arterial thoroughfares would have to be considerably wider than this, and the new by-laws would enforce a width of not less than 60 ft. In the case of new streets, where it was obvious there would never be a large amount of vehicular traffic, a width of 40 ft. would be enforced where buildings came up to the building line, but where buildings were set back 30 ft. from the centre of the road a width of 30 ft. would be allowed for the road, ensuring 60 ft. between the opposite rows of buildings. In certain main arterial thoroughfares the width would be 100 ft. We feel there is room for the disappointment of many who think that the appearance of newly-planned districts will be improved by the adoption of wide roads, as when combined with small buildings they accentuate the impression of poverty of design, and suggest monotony. The question of their hygienic advantages is an entirely separate one.

THE BUILDING TRADE.

THE INCREASE OF RENT AND MORTGAGE INTEREST (WAR RESTRICTIONS) ACT.

SINCE the article which appeared in our issue for December 24 was written the Increase of Rent and Mortgage Interest (War Restrictions) Bill has become law, but in a form so different from the original draft that it may be useful to again consider the provisions now embodied in the Act. The original clause 1, which limited the Bill to certain areas, has been eliminated altogether, and now the Act is of general application, except that there are special provisions relating to Scotland and Ireland.

To ascertain to what houses the Act is to apply reference has now to be made to sect. 2, sub-sect. (2), which has been altered in the passage of the Bill through Parliament. The exemption of houses the rateable value of which exceeds £40 has been deleted, and the Act now applies to any house or part of a house let as a separate dwelling where such letting does not include any land other than the site of the house and a garden or other premises within the curtilage of the dwelling-house, where either the annual amount of the standard rent or the rateable value of the house or part of the house does not exceed (*a*) in the Metropolitan Police district, including the City of London, £35; (*b*) in Scotland, £30; (*c*) elsewhere, £26. A new provision has been added that the Act shall not apply to a dwelling-house let at a rent which includes payments in respect of board, attendance, or use of furniture.

A great point was made of retaining the double test of both standard rent and rateable value, but it is hard to see what object is attained, whilst it makes the Act apply to houses of a higher rental than might at first sight be gathered from the Act. It is hardly possible that in any case the house is let at a rent less than the rateable value, so in fact the Act will operate on the rateable value, and will embrace houses let at from a quarter to a third above the limits mentioned in this sub-section.

Not only are houses thus brought into the Act having a rental in London of about £44 and elsewhere £33, but the original intention of the Bill seems to have been totally lost sight of. In the original Bill, in clause 1 it was stated that, "having regard to conditions arising out of the present war," the Act would be applied in certain areas by Order in Council, and in other areas "where it appears to His Majesty that owing to the influx of population or other circumstances attributable to the present war there is a dearth of housing accommodation," and in a note to our article of December 24 we drew attention to the assurance that we understood had been given in Committee that if the scope of the Act was enlarged, yet it would be limited to cases where there was interference with the housing of the working classes, notably in munition areas. In the Act as passed there is not one word of any such qualification, and the Bill is like a quick-change music-hall artist:—Having entered the House as a Bill necessitated by the urgency of the times to prevent certain classes from being exploited, after a brief absence it has returned as a full-fledged Act, limiting any increase in rents and interests on mortgages all over the country, with a very high rental limit and without any reference to the working classes. When the Bill was introduced, imagining that it was a measure intended to redress certain limited though real grievances the consequence of the war, we, as patriotic citizens, withheld any undue criticism of the measure; but in the form the Act has now taken we can only condemn it as a totally uncalled for and ill-conceived piece of legislation which will bear heavily on a class already very hard hit by the war, and which may relieve many persons who are in no need of relief, but to whom the war has brought a considerable increase of wealth and prosperity. It will further discourage building, and thus accentuate the difficulty of finding housing accommodation, and so increase the difficulties and hardships it purports to deal with.

There is now a provision in the Act enabling the landlord to recoup himself for an increase in the rates, including water rates and charges; but in the provision relating to an allowance not exceeding 6 per cent. on the amount expended on the improvement or structural alteration of any dwelling-house it is now expressly stated that this shall not include expenditure on decoration or repairs. Where any increase in rent is made it shall not be recoverable until the expiry of four clear weeks after a notice served by the landlord upon the tenant.

There is also a new section limiting the power of the landlord to obtain an order for the recovery of possession or for ejectment.

As regards mortgages, the Act is rather more favourable to the mortgagee than the Bill was. There is a provision that the Act shall not apply to any mortgage comprising one or more dwelling-houses to which the Act applies and other land if the rateable value of such houses is less than one-tenth of the whole of the land comprised in the mortgage; and where the rate of interest on a mortgage has been increased in pursuance of a notice given before August 4, 1914, demanding either repayment of the capital or an increased rate of interest, such increase is excluded from the operation of the Act. The section which limits the right of a mortgagee to call in his mortgage has also been modified in favour of the mortgagee, and there is an important provision relating to mortgages of leasehold interests where the mortgagee can show that his security is diminishing seriously in value or is otherwise in jeopardy. It also appears that it is intended not to apply the provisions of the Act preventing mortgages from being called in to mortgages where the principal is repayable by periodical instalments extending over a term of not less than ten years or where the mortgagor consents. We have not attempted a complete summary of all the provisions of the Act, but it will be seen that this is a measure which will most seriously depreciate the very class of property which is most heavily taxed for war purposes, and in its present form we cannot but think that no case whatever has been made out, or even been attempted to be made out, for invidious legislation of this character.

THE PROPERTIES OF LIMES AND PLASTERS.—II.

LIMES as a class, including as this does the chief ingredients of hydraulic mortars and cements, are very important materials, and it will be convenient to subdivide the discussion upon them into those of simple structure—(1) the fat and dolomitic limes which will form the subject of this article, (2) the hydraulic limes, and (3) natural and artificial cements.

All limes, whatever their nature, are prepared from some mineral which is substantially carbonate of lime (calcium carbonate $CaCO_3$), either in the form of limestone, chalk, marble, or occasionally shell fragments. These materials often contain other constituents which modify the properties of the resulting lime in a very marked manner; but when the amount is small—say not more than 5 per cent.—the resulting burnt product comes under the category of ordinary non-hydraulic lime, and if the additional constituent is magnesia the product is known as a dolomitic lime.

When calcium carbonate is heated to redness it decomposes into free lime (calcium oxide) and carbonic acid gas (carbon dioxide) thus :—

$$\underset{\text{Cal.carbonate.}}{CaCO_3} = \underset{\text{Cal. oxide.}}{CaO} + \underset{\text{Carbon dioxide.}}{CO_2}$$

And every 100 parts by weight of cal. carbonate thus decomposed produce fifty-six parts of free lime and forty-four parts of carbonic acid gas. The operation is generally conduct in somewhat primitive fashion by heati the limestone or chalk in kilns which intermittent in working, which represents ve great loss in fuel, as after each operati the kiln itself—a tremendous absorber of heat must be allowed to cool before it can be refill Many forms of continuous kilns exist whi admit of the addition of the stone at the t and its withdrawal below when burnt; b the old-fashioned types still exist very larg in this country, doubtless owing to the absen of mechanism and the simpler labour proble thereby involved. Another great source waste is the total loss of the carbonic a gas—44 tons, or some 600,000 cubic ft. every 100 tons of limestone burnt—whi could be put to useful purposes. So attempts have been made to remedy this was but until lime is made by some intensi process, small quantities being dealt with at hi temperature in a continuous furnace, t waste seems almost inevitable. Free lime h a marked tendency to recombine with carbo acid gas when in contact with it; the m efficient methods of lime-burning, therefo must provide for a rapid removal of the g when liberated. This, of course, ordinar takes place by simple expansion by hea which causes a constant upward current the kiln.

Lime Slaking.

When lime is slaked by the addition water it becomes hydrated lime, and if eighte parts by weight of water are added to fifty-s of free lime (that is water equal to one-thi the weight of the lime approximately), t whole will remain as a dry bulky powd the chemical action being :—

$$\underset{\substack{\text{Free lime}\\ \text{(Cal. oxide).}}}{CaO} + \underset{\text{Water.}}{H_2O} = \underset{\text{Hydrated lime.}}{CaO_2H_2}$$

The actual increase in bulk, which is gre depends upon the purity of the lime and t rapidity of slaking. A pure lime—the be fat lime—suddenly slaked into water w expand to a powder three and a half times original volume; but, if allowed to slowly abso moisture from the air, will eventually increa to little more than one and a half times previous bulk. If impure it will expa much less, and the action will be accompani by but little display of heat. Further additi of water merely converts the hydrate powd into a slurry, or cream, of lime and wate but, as will be seen in a later discussion, li can, under suitable condition, take up wat of crystallisation (see Art. I.) and form a we defined solid with much more water than present in the hydrate as described above.

Fat limes, as these pure limes are calle are used chiefly for running "putty"—th is, they are the material of the plasterer and, though used with sand for mortar, th never attain any appreciable strength, setti merely through mechanical cohesion due simple drying and to the very low absorpti of carbonic acid gas always present in t atmosphere, which gradually reconverts the into limestone, thus :—

$$CaO + CO_2 = CaCO_3.$$

This conversion, however, is never fou completed even in the most ancient buildin It is possible also that the free limes gradual form in some measure the crystallised hydra referred to above, by absorbing water water of crystallisation. Fat lime morta composed of one of lime to two of sand, posses tensile strength of 30 lb. to 50 lb. per square in and even after a year the latter figure is n likely to be exceeded. This strength is, course, trivial.

Dolomitic Limes.

Certain limestones contain a notable p portion of magnesia—of such a character the Mansfield Woodhouse stone, for examp These stones are found in the Permian g logical formation which is exposed on the c

South Shields, and runs in a narrow band he Midland Counties. These stones consist alcium carbonate and magnesium carbonate arying proportions, and when "burnt" give ixture of free lime and magnesia (MgO) :—

$$\left.\begin{matrix}CaCO_3 \\ MgCO_3\end{matrix}\right. = \left.\begin{matrix}CaO \\ MgO\end{matrix}\right\} + 2\,CO_2.$$

agnesium carbonate is much more readily omposed than calcium carbonate, hence se limestones are more readily "burnt." magnesia, further, does not absorb water such great activity, nor expand so much ing the operation. Thus dolomitic limes their behaviour on the addition of water ewhat resemble poor limes—that is, those ch contain a large proportion of inert erials or which are insufficiently burnt. this reason, possibly, they do not appear to very popular; but, although very weak as pared with the hydraulic class of these erials, they are eventually (say, after a) nearly twice as strong as pure fat limes, will carry sand better.

wing to the unskilled labour generally ployed for slaking limes, and the consequent ger of lumps of free lime, which would se eventual disruption in the finished k, limes are often hydrated (dry slaked) water or steam before they are sent out, ch is usually a good investment for the nufacturer. In order to compare prices uick and hydrated lime, the data already tioned may be utilised. If bought by bulk nust be remembered that hydrated lime possibly three times the bulk of free lime owder, and if by weight the water absorbed esents one-third of the weight of its original k lime.

MARCATION DISPUTES AND THEIR SETTLEMENT.

CONFERENCE was held at Koh-i-Noor se, Kingsway, London, W.C., recently, urther consider a national scheme for the blishing of committees to deal with demarca- disputes. It was reported that the follow- unions and associations have definitely roved the rules and intimated readiness ign the agreement :—National Federation of ding Trades Employers of Great Britain Ireland; National Federation of Slate chants, Slaters and Tilers; National ciation of Master Plasterers; National ciation of Master Heating and Domestic ineers; Society of Operative Stonemasons; chester Unity of Operative Bricklayers; eral Union of Operative Carpenters and ers; Amalgamated Society of Carpenters Joiners; National Association of Operative terers; Amalgamated Slaters' and Tilers' ident Society; National Association of ders' Labourers; National Union of rative Heating and Domestic Engineers; vies, Builders' Labourers, and General ourers' Union; United Builders' Labourers' n; Amalgamated Society of Woodcutting hinists; Amalgamated Union of Cabinet ers; Electrical Trades Union; National lgamated Society of Operative House and Painters and Decorators; Operative Brick- s' Society. It was therefore unanimously ved :—"That this meeting of representa- of the federations, associations, and ties which have signified their adhesion to proposed National Demarcation Scheme satisfied that a sufficient number of sions have been secured to warrant the me being proceeded with, the said scheme nd is hereby constituted as from this ." The necessary elections of the com- ees and officers will now be proceeded with, it is expected the scheme will be in working r in the spring; but in order to deal with disputes which may arise meanwhile it was imously agreed :—"That, in view of the that the new organisation cannot be got working order until the first annual meetings he respective committees are held in uary and March, this meeting requests onciliation Boards to place their machinery e service of those concerned in any demarca- dispute which may arise meanwhile, nenting their existing membership tem- rily by the admission of all parties erned in any dispute, and that the parties to such disputes be recommended to avail themselves of those services *pro tem.*"

The scope of the scheme is, briefly, the settlement of all questions or disputes relating to demarcation of work that may from time to time arise between the parties, by reference for adjustment to standing joint committees with a view to an amicable settlement of the same without resorting to strikes or lock-outs. In the event of a demarcation dispute or question between trades represented by the societies who are parties to the agreement arising on or in connection with the works of an employer whose federation is a party to the scheme, there shall be no stoppage of work, either of a partial or general character, but such dispute or question shall be considered and dealt with in accordance with the rules and regulations provided. These follow the lines of the National Conciliation Scheme, which has worked successfully for upwards of ten years, but certain special features have been introduced, taken from what seemed most useful in other existing demarcation schemes. The new scheme will work alongside, but independently, of the Conciliation Scheme.

FIRE-RESISTING WALL BOARDS.

As resistance to fire is a very important point with all wall boards, the experiment on "Fiberlic" and other boards will be of interest. An illustration which we have seen shows three boards. No. 1 is "Fiberlic" root fibre board, Nos. 2 and 3 are ground wood-pulp boards. The test was made by means of a blow-pipe with a 2-in. flame, and the boards were heated for three minutes under this intense flame, the tip of the flame actually touching the boards. The photograph shows the resistance to fire of the "Fiberlic" board—it is only just browned; while the other boards, as can be seen from the photograph, were burned through. It is explained that "Fiberlic" is highly fire-resisting because of the special chemical treatment during manufacture of the tough root fibres; added to this is the great density created by hydraulic pressure. This density also gives the material its sound-deadening qualities and makes it a non-conductor of heat and cold. The board, which is manufactured by Messrs. MacAndrews & Forbes, Ltd., Finsbury-court, Finsbury-pavement, E.C., is, we are informed, making considerable headway in this country, although it has only been on the British market a few months.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations :—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Ashby Woulds.—The Council's Surveyor has received plans for a house to be built on the east side of the proposed new road opposite to the Railway Inn, Moira.

Bedford.—The R.D.C. has passed plans for a residence at Putnoe for Mr. A. G. Prosser, and one at Kimbolton-road for Mr. R. Atkins.

Birmingham.—The City Council has sanctioned the extension and equipment of the temporary supply station at Nechells, at an estimated cost of £148,660.

Braintree.—Plans passed by the U.D.C. :—For the erection of two pairs of villas by Mr. E. Warren at Chapel-hill, an office and garage at Manor Works, and a mess-room for Messrs. Lake & Elliot's workmen, and plans for a verandah at the Oak Inn, Chapel Hill.

Bristol.—The Docks Committee has granted permission to the G.W.R. Company to erect two sawdust huts at Portishead Dock. On the question of alternative sites proposed for the erection of the barge loading and intake plant on the east side of the Royal Edward Dock, the Committee has authorised the engineer to proceed with the work on the site between Sheds O. and P., and to accept tenders for the various portions of the work.

Bromley.—The L.G.B. has sanctioned the raising by the West Kent Main Drainage Board of £700 for the construction of a jetty at the outfall works.

Buckie.—The P.C. has approved of the scheme for an extension of the Rathven Parish Hospital.

Cannock.—Messrs. Macfarlane & Robinson are developing some land in connection with their new works at Bushbury for erecting houses, &c., and propose to make some new streets, which they will ask the Council to take over.

Chorley.—The T.C. has approved plans prepared by Messrs. Woodhouse & Howard of the proposed public baths, and are making application to the L.G.B. for a provisional sanction to the borrowing of £10,000, being the estimated amount required for the provision of the baths.

Crayford.—Amongst the improvements to be undertaken in Crayford in the future will be the erection of a large hostel near the works, to accommodate the single men employed by Messrs. Vickers.

Dalton.—The U.D.C. has approved a plan of sanitary additions to the Railway Inn, Askam, for Messrs. J. Thompson & Co., Ltd., of Barrow.

Dundee.—Plans and sections of proposed new buildings, etc., have been passed by the T.C. as follows :—Hilltown, cinematograph theatre for Mr. R. Pennycook; King-street, balcony for trustees of Home for Incurables.

Edinburgh.—At a meeting of the Ladies' Committee of the Scottish Veterans' Garden City Association it was reported that a meeting of representatives of all the committees in Scotland would shortly be held to fix the site of the first building scheme.

Edmonton.—Permission has been granted to the Great Eastern Railway Company by the Metropolitan Water Board to construct a railway siding at Angel-road, Edmonton, and to carry it over Pymme's Brook and across the Accommodation-road, giving access to the Board's intercepting drain by means of a level crossing.

Essex.—The C.C. has decided to carry out certain widenings required on the military road now in course of construction between Stanstead and Haverhill, at a cost of £214, the widening on the road from Thaxted to Stamford, at a cost of £65, and a further widening of the same road at a cost of £93 10s. 6d., also to widen the corner at the junctions of the roads leading from Dunmow to Elsenham station and from Braxted to Stansted, at an approximate cost of £50.

Flax Bourton (Somerset).—At a recent meeting of the Somerset C.C. the Mental Deficiency Act Committee reported that they had before them plans of the proposed alterations and additions to the school buildings at the Long Ashton Union Workhouse at Flax Bourton. They resolved that the plans should be submitted to the Board of Control, and it was decided not to put the work in hand until peace had been declared.

Folkestone.—The Kent C.C. have decided to make a new piece of road at Capel, halfway between Folkestone and Dover, to replace that which was damaged by the recent landslip in the Folkestone Warren.

Fowey.—The T.C. has resolved to ask the L.G.B. to hold an inquiry in connection with the proposal to expend £300 on the extension of the cemetery.

London.—The justices have sanctioned the variation of approved plans of alterations to the Crown and Grapes, Little Newport-street, W.C. Plans have been passed for certain alterations to be carried out in the King William the Fourth, 110, Grosvenor-road, and the King's Head, 176, Warwick-street, W. Plans have been approved for alterations or additions at the Lamb, Milton-road, Plaistow (licensee Isaac Harvey), and the Town of Ayr, 6, Victoria Dock-road (licensee, Edward W. Rice).

North Bromsgrove.—The Rubery town-planning scheme promoted by the North Bromsgrove U.D.C. has received the final approval of the L.G.B. The area for which the scheme has been adopted contains approximately 544 acres, and comprises the hamlets of Rubery, the Whetty, and the Eachway.

Ormskirk.—Some members of the D.C. have been appointed to interview the agent to Lord Derby with a view to the purchase of land off Aughton-street for the proposed workmen's dwellings. It is intended to erect on this site, if it is procured, between fifty and sixty cottages when the necessary powers can be obtained from the L.G.B. for the purpose.

Ponders End.—The Metropolitan Water Board has granted permission to the Rees Roturbo Manufacturing Company, Ltd., to construct a siding over the Board's intercepting drain and freehold land immediately south of Ponders End Station.

Retford.—At a recent meeting of the T.C. the architect produced plans for an alternative scheme for an isolation hospital, and the same were considered and ordered to be submitted to the L.G.B. for approval.

Sheffield.—The Corporation has decided to erect 261 houses, at a cost of £75,000, on their Wincobank estate, for the accommodation of munition workers. The City Council propose to close Adsetts-place for the extension of works.

Spain.—The *Gaceta* of December 24 notifies that tenders will be received, within a period of thirty days from that date, at the "Casa Consistorial," Valencia, for the termination of hospital construction works in that city. The

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* See also our list of Competitions, Contracts, etc., on page 58.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9¼	9½	—	9	8	6½	6½	6¼
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11½	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9¼	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9½	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9½	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	9	8½	8¼	8	7½	5½	5½	6
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¼	5¼	5¼
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10	10	10¼	10	10	10	8½	7½	7½	7½
Leicester	10¼	10	10½	10½	10	10	9	7½	7½	7½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10	10	10	10½	9½	10	9	7½	7½	8
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9	9	9	9	9	9	8	6½	6½	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	10½	10	10	10½	9½	10	9¼	6	6½	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The masons' rate given is for bankers; fixers usually ½d. per hour extra.

estimated cost of the works is 67,657 pesetas (about £2,700).

Stafford.—The B.G. have obtained sanction to the erection of the Cottage Homes, at a cost of £2,500.

Sunderland.—The R.D.C. have made an arrangement with Messrs. Barclay & Co. for the borrowing of £7,000, which the L.G.B. had sanctioned the Council borrowing for the purpose of repairing the sea wall at Whitburn.

Tilbury.—Arrangements are proposed for town-planning the whole district.

Wyken.—The Foleshill R.D.C. has approved plans for 600 houses to be erected in the parish of Wyken by the Coventry Corporation for munition workers.

TRADE NEWS.

Boyle's Latest Patent "Air-Pump" Ventilators have been applied to the new engine house, Dunroyd Mills, Guiseley.

The New Sanatorium, Inverness, is being supplied with Shorland's warm-air ventilating patent Manchester stoves and Manchester grates, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

In order to prevent water percolating through the cement work of the Propagation Pits in the Botanical Gardens, at Gasnevin (Dublin), the powder Pudlo has been employed with satisfactory results.

A DECEASED BUILDER'S ESTATE.

The late Mr. Charles Bean King, of Frognal, Hampstead, head of the firm of C. B. King, Ltd., has left estate to the gross value of £32,433.

DESK CALENDAR PAD.

Messrs. Stephens & Carter, Ltd., Green-street, Paddington-green, W., have sent us one o their very useful Desk Calendar Pads for 1916; and they inform us that they will be pleased to forward a similar pád to anybody in the Trade applying for one.

A NEW CALENDAR.

Messrs. Robert Boyle & Co., of 64, Holborn-viaduct, have sent us one of their useful littl calendars, in a case for the waistcoat-pocket, fo the year, with which are combined architectura scales, which many architects and surveyor will find useful.

CLARIDGE'S ASPHALTE COMPANY.

We are informed of the resignation of Mr R. T. Wilkinson of his position as a directo of Claridge's Patent Asphalte Company, Ltd. thus severing a connection which he has maintained unbroken for sixty-three years. Th good wishes of all his friends will go with hin in his well-earned retirement. The new directo of this company is Mr. W. J. Robinson, who up to a few years ago, was connected with th timber trade, and may be known to some of ou readers.

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NEW COMPANIES.

THE undermentioned particulars of ne companies recently registered are taken fron the Daily Register compiled by Messrs. Jorda & Sons, Ltd., Company Registration Agent Chancery-lane, W.C.

PIPER & CO. (BUILDERS), LTD. (142,558 6, New-street, Huddersfield. Registerec December 29. To acquire by purchase o otherwise business of contractors and builder stone merchants, now carried on by Piper & Co at Birkly, Huddersfield, and to carry o business of quarry owners, joiners, slater and carriers. Nominal capital, £1,000 i 1,000 £1 shares.

EDWARD PUNNETT & SONS, LTD. Registere December 30 (142,563). To acquire, tak over, and carry on business of builders an contractors now carried on by George Benjami Punnett and A. W. Punnett at Tile Hous Works, Tonbridge, as Edward Punnett & Son and to carry on business of electrical, sanitar gas, water, and general engineers, painter brick, tile, and cement manufacturers, et Nominal capital, £8,000 in 8,000 £1 shares.

CHAPMANS (LONGTON), LTD. (142,594 Registered January 1. To carry on busine of manufacturers of, agents for, and deale in pottery, earthenware, china, stonewar porcelain, statuary, and works of art, gla workers, bricks, tiles, pipes, colliery owne engineers, carpenters and woodworkers, builde shipowners, etc. Nominal capital, £5,000 5,000 £1 shares.

THE ARCHITECTURAL ASSOCIATION AND THE ROYAL ARCHITECTURAL MUSEUM:

CHANGE OF PREMISES.

The following statement, signed by the President of the Architectural Association, has been issued to members of the Association:—

"For some years past the question of premises has been prominently before the Council, owing to the increasing activities of the Association and the growth of the School. The present accommodation is neither adequate nor suitable in normal times, and with a view to a change in the near future the Council acquired the leases of Nos. 35, 37, and 39, Great Smith-street as a preliminary step. This was done with the concurrence of the Advisory Council of the Association, with whom all important matters affecting the welfare of the Association are discussed.

The outbreak of war last year compelled the Council to postpone any further steps towards the acquisition of new premises or the enlargement of the existing building, and the matter has been in abeyance until recently, when an offer was made for the premises in Tufton-street by the National Lending Library for the Blind.

The Council, feeling that this offer was too important to be allowed to pass, consulted the Advisory Council, put the whole matter before them, and informed them fully of the policy pursued in the past and the aims of the Association for the future. The result of the conference was that the Council accepted the offer made by the National Lending Library for the Blind, and has made arrangements for the Association to occupy No. 37, Great Smith-street as temporary premises until the conclusion of the war.

The change of premises will not interfere with the activities of the Association, and the School will be carried on as heretofore.

The question then came before the Council of the best method of dealing with the contents of the Royal Architectural Museum, which occupies nearly one-half of the available space in the building. It has long been a matter of regret that the housing of this very valuable collection of casts has left so much to be desired in the way of suitable space and good lighting, notwithstanding the fact that the Association has spent some hundreds of pounds on its rearrangement and classification.

In recent years the number of visitors has been so small that the cost of the upkeep, which falls on the Association, has not been justified. The Council has therefore come to the conclusion, with the concurrence of the Trustees of the Association, that the wishes of the early promoters of the Museum could best be met by offering the casts to the Royal Victoria and Albert Museum, retaining a few that are necessary for the School. The offer has been accepted, and the casts are now the property of the nation, and the authorities have promised that every facility will be given to students who desire access to them.

These changes have doubtless been made in the best interests of the Association, and after the most careful thought has been given to the matter. The most important result of the change is a very large annual saving in rent and other standing charges, which will go far to meet the heavy losses sustained by the Association owing to the war.

It is hoped that the action of the Council will meet with the approval of all members of the Association. With this end in view, a special general meeting was held on Monday, when fuller details of the matters referred to in this letter were put before the members."

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BOOKS RECEIVED.

L.C.C. Regulations relating to Reinforced Concrete, with Explanatory Notes. By Ewart S. Andrews. (London: B. T. Batsford, Ltd. 2s. 6d. net.)

Bridge Foundations. By W. Burnside. (London: Scott, Greenwood, & Son. 4s. net.)

OBITUARY.

Mr. J. Sutcliffe.

Mr. John Sutcliffe, architect, of Todmorden and Hebden Bridge, died at Harrogate recently, aged seventy years. He was the designer of many of the chapels and schools and the better-class houses in the Calder Valley.

Second-Lieut. A. S. Baxter.

Second-Lieut. Arthur S. Baxter, 18th Middlesex Regiment (Pioneers), died on January 2, at the Empire Hospital, Vincent-square, S.W., of wounds received at Givenchy on December 8. He was the second son of Mr. George Baxter, of Morella-road, Wandsworth-common. He enlisted in the Seaforth Highlanders in September, 1914. He was a Professional Associate of the Surveyors' Institution, and had passed the Fellowship examination; when he joined the forces he was engaged on the land valuer's staff.

Mr. H. Hems.

The death is announced of Mr. Harry Hems, aged seventy-four years, head of the firm of Messrs. Harry Hems & Sons (Mr. H. Turner Hems and Mr. Wilfrid P. W. Hems), of Exeter. Mr. Hems began life as a cutler in Sheffield; he was then apprenticed to a wood-carver; he visited Italy, and removed from London to Exeter about forty-five years ago. In 1901 he brought out "A Tramp over Mont Cenis Thirty-seven Years Ago." Mr. Hems carried out many designs by Sir Aston Webb, Messrs. Tully & Clark, of St. Louis, U.S.A.; Mr. Hague, of Dublin; Mr. C. E. Deacon, of Liverpool; Mr. E. Sedding; Mr. Doran Webb; Mr. C. Foster Hayward; Mr. Wm. White; Mr. W. H. Nash; Mr. C. E. Ponting; Mr. F. W. Stevens, of Bombay; Mr. G. H. Fellowes Prynne; Mr. J. Oldrid Scott; Sir G. G. Scott; Mr. J. C. Traylen; Mr. J. P. Seddon; and other eminent architects. His chief ecclesiastical works comprise the carving and sculpture, in Cluney and Mansfield Woodhouse stone, for the restoration of the high altar screen, St. Albans Cathedral (October 29, 1887 *); stalls, throne, and carving, St. John's Cathedral, Newfoundland; reredos and high altar, 35 ft. in height, of Caen stone, Christchurch Cathedral, St. Louis, U.S.A. (1912); and the pulpit, Norwich Cathedral (September 5, 1891 *). Deceased also carried out a large amount of ecclesiastical and memorial work all over the country, especially in the West Country.

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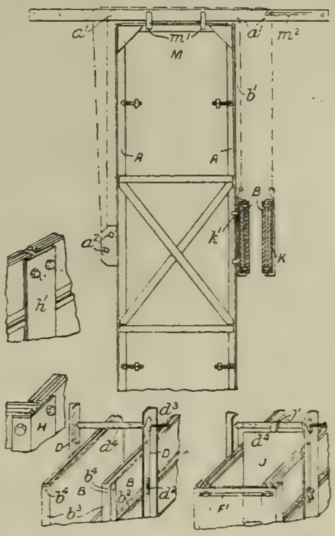
SELECTED PATENTS.

15,910 of 1914.—Thomas William Bailey: Moulding walls *in situ.*

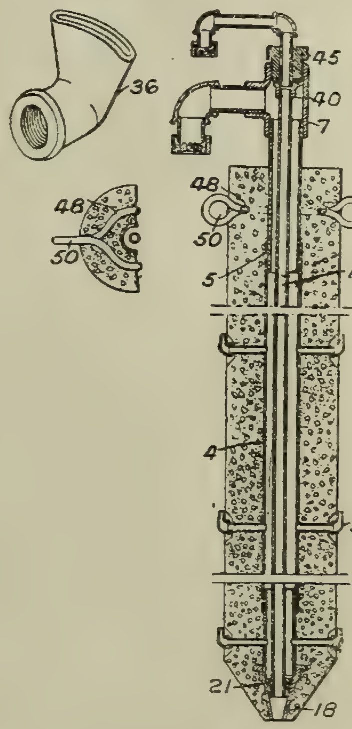
This relates to a method of moulding walls *in situ*, in which the mould boxes or boards B are supported by frames A in such a manner that they can be moved both vertically and longitudinally. The boards are supported by holders K in which they can slide longitudinally, the holders being furnished with clips k^1 embracing T-shaped portions of the frames A. The holders are supported by cables b^1 passing over pulleys a^1 on cantilevers M and over winding-drums a^2. Instead of the holders K, the cables b^1 may be secured to shanks slidably engaging slots in the upper edges of the boards. The ends of the boards are provided with metal plates b^3 furnished with tapped holes b^1 for securing an end plate F^1, an angle connection H, or a plate h^1, for securing two boards end to end. The mould-boards may be spaced apart by angle-irons D, secured by bolts passing through slots d^2 and the slots b^2 and connected by bolts d^3 and sleeves d^4. Partitions J may be suspended from the sleeves d^4 by hooks j^1. One set of pulleys a^1 is adjustable in slots m^2, according to the spacing of the mould-bands. The cantilevers M may be detachably secured by clips m^1, so that the height of the sections A can be increased, and their inner ends may be furnished with a pulley whereby materials may be elevated. Blocks of wood may be positioned within the moulds to form flues or to remain within the wall for the attachment of the skirting or picture rail.



15,910 of 1914.

17,888 of 1914.—Edward Bignell: Sinking caissons, piles, etc.

This relates to piles, caissons, and similar bodies having an excavating nozzle at the lower end and lateral upturned nozzles at the sides with separate water supply to the excavating and upturned nozzles respectively. The pipe 12 for supplying the excavating nozzle 18 is provided at its lower end with a tapered plug 21, which is forced into the tapered interior of the nozzle 18 by a screwed gland 45, which bears on a collar 40 on the pipe 12. The pipe 4 for supplying the lateral nozzles comprises two tubular end sections 5 and a sheet-metal middle section, the lower end section being screwed into the nozzle 18, and the upper end section engaging a supply fitting 7, into which is screwed the gland 45. The side nozzles 36 are of flattened flaring form. A collar 48 provided with projecting eyes 50 is embedded in the concrete of the upper part of the pile, and enables the pile to be attached by a chain to a suitable hoist.



17,888 of 1914.

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* Illustrated in the *Builder.*

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, vi.; Public Appointments, —; Auction Sales, xviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 17.—**Bristol.**—PAINTING, ETC.—Painting, distempering, etc., at homes at Teawell-hill, Staple-hill, for the Guardians. Mr. J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol.

JANUARY 17.—**Ossett.**—PAINTING, ETC.—For painting and decorating the Primitive Methodist Church, South-parade, Ossett. Specification of Mr. G. H. Lucas, Post Office, South-parade, Ossett.

JANUARY 19.—**Helston.**—REPAIRS, ETC.—Internal and external repairs, etc., at Helston Police-station, for the Cornwall C.C. Standing Joint Committee. Specifications may be seen at the Police-station, and further particulars will be supplied on application to Mr. L. D. Thompson, County Surveyor, County Hall, Truro.

JANUARY 21.—**Manchester.**—CONTRACTORS' AND PLUMBERS' WORK.—Execution of general contractors' and plumbers' work that may be required in connection with the drainage of houses and other premises for a period of twelve months ending March 31, 1917, for the Corporation. Forms of tender, etc., of Mr. H. Prescott, Manager of the Drainage Department. Deposit, £1 1s.

JANUARY 24.—**Richhill (Ireland).**—COTTAGES.—Erection of three cottages at Richhill station for the Great Northern Railway Company (Ireland). Drawings and specification may be inspected at the Engineer's Offices at Dublin and Belfast, and bills of quantities and forms of tender obtained from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit, £1 1s.

JANUARY 27.—**Galway.**—CONCRETING.—Concreting of passenger platforms at Galway station for the Midland Great Western Railway of Ireland. Plans and specification of Mr. Wm. Purcell O'Neill, Chief Engineer to the Company, Broadstone Terminus, Dublin. Deposit, 10s.

JANUARY 31.—**South Milton.**—REPAIRS, ETC.—For repairs and alterations to farm buildings at Whitlocksworthy, S. Milton, near Kingsbridge. Specifications, etc., of Messrs. Bourne & Sons, land agents, Totnes.

FEBRUARY 9.—**Lancashire.**—PAINTING.—For painting at various places for the Directors of the Lancashire and Yorkshire Railway. Forms of tender, etc., on personal application at the Engineer's Office, Hunt's Bank, Manchester.

FURNITURE, MATERIALS, etc.

JANUARY 14.—**Manchester.**—IRON, STEEL, ETC., WHITE LEAD.—Supply to the directors of the Manchester Ship Canal Company during the six months ending July 31, 1916, of iron, steel, files, screws and cotter pins, oils, tallow, white lead, etc. Specifications, etc., of the Stores Department, Manchester Docks, Trafford-road, Salford.

JANUARY 19.—**Gillingham.**—BUILDERS' MATERIALS.—Supply to the T.C. of the Borough of Gillingham for one year, commencing on April 1, 1916, of builders' materials. Specifications, etc., of Mr. J. L. Redfern, Borough Engineer and Surveyor, Corporation Offices, Gillingham, Kent.

JANUARY 22.—**Norfolk.**—STONE, GRAVEL, ETC.—Supply to the Eastern and Western Highways Committees of the Norfolk C.C. of flints, gravel, chalk, etc., for the year ending March 31, 1917. Specifications, etc., of Mr. W. W. Gladwell, County Surveyor, The Shirehouse, Norwich.

* JANUARY 26.—**Chelsea.**—MATERIALS, ETC.—The Chelsea B.C. invite tenders for supply and execution of certain articles and works.

JANUARY 26.—**Essex.**—STONEWARE PIPES, ETC.—Supply to the Essex C.C., for the year ending March 31, of stoneware pipes, Norwegian granite kerb and setts, York kerbs, etc. Forms of tender, etc., of the County Surveyor, Chelmsford.

JANUARY 26.—**Woolwich.**—BUILDERS' MATERIALS.—Supply to the Council of the Metropolitan Borough of Woolwich of builders' materials from April 1, 1916, to March 31, 1917. Forms of tender, etc., of Mr. J. Sutcliffe, A.M.Inst.C.E., Borough Engineer, Town Hall, Woolwich.

JANUARY 29.—**Wigan.**—BUILDERS' MATERIALS.—Supply to the Corporation for the twelve months commencing April 1 next of builders' materials. Forms of tender, etc., of the Borough Engineer and Surveyor, Mr. A. T. Gooseman, Municipal Offices, King-street West, Wigan.

FEBRUARY 5.—**Earby.**—GRANITE, ETC.—Supply to the U.D.C. during the twelve months ending March 31, 1917, of granite, limestone, tarred limestone, tarred slag, iron castings, etc. Specifications, etc., of Mr. J. E. Aldersley, Surveyor, Council Offices, Earby.

FEBRUARY 5.—**Wallasey.**—BUILDERS' MATERIALS.—Supply to the Corporation during the twelve months ending March 31, 1917, of builders' materials. Forms of tender of Mr. W. H. Travers, A.M.Inst.C.E., Borough Engineer and Surveyor, 18, Falkland-road, Wallasey.

FEBRUARY 7.—**Croydon.**—BUILDERS' MATERIALS.—Supply to the Council of builders' materials for the year ending March 31, 1917. Tender forms of the Borough Engineer, Town Hall, Croydon.

* FEBRUARY 7.—**Hendon.**—WORKS AND MATERIALS.—The Hendon U.D.C. invite tenders for supply of materials and execution of works for one year from April 1 next.

FEBRUARY 7.—**Pembroke.**—BUILDERS' MATERIALS.—Supply to the Pembroke U.D.C., County Dublin, of builders' materials during the twelve months ended March 31, 1917. Specification, etc., can be obtained at the Town Hall, Ballsbridge, Co. Dublin.

MARCH 8.—**Aberaman.**—PAINTS, ETC.—Supply to the directors of the Powell Duffryn Steam Coal Company, Ltd., from April 1, 1916, of paints, etc. Forms of tender, etc., of the Stores Manager, Aberaman Offices, near Aberdare.

ENGINEERING, IRON, AND STEEL.

JANUARY 21.—**Manchester.**—IRON CASTINGS.—Supply of ventilating grids and other castings that may be required in connection with drainwork for the twelve months ending March 31, 1917, for the Corporation. Forms of tender, etc., of Mr. H. Prescott, Manager of the Drainage Department.

JANUARY 31.—**Queensland.**—BRIDGE SUPERSTRUCTURE.—Supply and manufacture of superstructure for bridge over Saltwater Creek, Townsville-Ingham Railway, for the Queensland Government Railways. Plans, etc., at the office of the Agent-General for Queensland, 409-410, Strand, London, W.C.

FEBRUARY 23.—**Johannesburg.**—MACHINERY, ETC.—The supply or supply and erection of machinery and fittings for proposed public wash-house, Newtown, Johannesburg. Documents and drawing may be seen on application to the Council's agents in London, Messrs. E. W. Carling & Co., St. Dunstan's-buildings, St. Dunstan's-hill, E.C. Deposit of £1 1s. is required for copies.

NO DATE.—**Halifax.**—BOILER.—Supply and fixing of a boiler at Salterhebble Council School for the E.C. of the Halifax Corporation. Specifications and forms of tender of Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit, £1.

ROAD, SANITARY, AND WATER WORKS.

JANUARY 15.—**Spilsby.**—GRANITE AND SLAG, ETC.—Supply to the R.D.C. of about 5,000 tons of broken granite, 7,500 tons of broken slag, and 500 tons of slag chippings. Specifications, etc., of Mr. Wm. Cooke Brakenridge, District Surveyor, of Highways, Spilsby.

JANUARY 17.—**Surrey.**—GRANITES, BASALTS, ETC.—Supply to the C.C. of granites, basalts, limestone, slag, tarmacadams, pitch, tar, and tar oils; also flints and fine gravel for footpaths. Specifications, etc., of the County Surveyor, County Hall, Kingston-on-Thames.

JANUARY 17.—**Thurrock.**—SEWER.—For the reinstatement of about 260 ft. of 20-in. diameter cast-iron outfall sewer, including the provision of about 24 tons of 20-in. diameter cast-iron pipes and special castings, for the Thurrock, Grays, and Tilbury Joint Sewerage Board. Drawing and specification prepared by Mr. G. Midgley Taylor Civil Engineer. Form of tender, etc., of the Engineer, Caxton House, Westminster, S.W. Deposit, £2 (cheque only).

JANUARY 18.—**Perry Barr.**—RAG STONE, ETC.—Supply to the U.D.C., during a period of six months and alternatively during a period of twelve months, of (*a*) Rowley rag stone, (*b*) blast furnace cinder or slag. Specifications, etc., of Mr Ernest Bailey, Surveyor to the Council, Council House, Green-lane, Hamstead, Birmingham.

JANUARY 18.—**Reigate.**—SEWERS.—For the construction of sewers at "The Cutting," near St. John's, Redhill, for the T.C. Plans, sections, and specification prepared by Mr. Fred T. Clayton, C.E., the Borough Surveyor. Form of tender, etc., of the Borough Surveyor, Municipal Buildings, Reigate.

JANUARY 19.—**Glamorgan.**—ROAD WIDENING, ETC.—Widening and strengthening the Swansea and Loughor main road between Fforestfach and Kingsbridge for the C.C. Plans and specification can be seen and copies of the bill of quantities obtained at the Police Station, Fforestfach, and of Mr. T. Mansel Franklen, Clerk of the County Council, Glamorgan County Hall, Cardiff.

JANUARY 19.—**Wellington.**—BROKEN GRANITE.—Supply to the U.D.C. of 200 tons of 2½-in broken granite. Specification, etc., at the Surveyor's Office, 14, Walker-street, Wellington.

JANUARY 20.—**Lambeth.**—BROKEN GRANITE, ETC.—Supply to the B.C., for the period of six months from March 31, 1916, of broken granite, flints, sand, gravel, ballast, etc., Portland cement, lime, etc. Specifications, etc., of Mr Henry Edwards, C.E., Borough Engineer, Town Hall, Brixton Hill, S.W.

JANUARY 20.—**Mold.**—ROAD MACADAM.—Supply to the Main Roads Committee of the Flintshir C.C. of (*a*) road macadam, chippings, an grit; (*b*) tar macadam; (*c*) broken and unbroke local stone; and (*d*) tar for tar spraying pur poses. Forms of tender, etc., of the County Surveyor, County-buildings, Mold, Flintshire.

JANUARY 22.—**Dundee.**—CAST-IRON PIPES.—Supply to the Dundee Water Commissioners o 110 tons or thereby of 4-in. cast-iron pipes Specification, etc., of the Subscriber, Mr Wm. H. Blyth Martin, Town Clerk, Dundee.

JANUARY 29.—**Bridgwater.**—STONE.—Supply t the R.D.C. of stone for the roads within th above district for one year from April 1, 1916 to March 31, 1917. Forms of tender, etc., o the Council's Surveyor, Mr. W. H. Cousins Surveyor's Office, Eastover, Bridgwater, or o Mr. T. M. Reed, Clerk to the Council, Bridg water.

JANUARY 29.—**Worcester.**—GRANITE, ETC.—Supply to the Worcestershire C.C. of granit blast furnace slag, and tar macadam during th year ending March 31, 1917. Forms of tende etc., of Mr. C. F. Gettings, County Surveyo 30, Foregate-street, Worcester.

Auction Sales.

* JANUARY 25.—**Brockley.**—Messrs. J. Skelding & Co. will sell by auction, on th premises, 283, Brockley-road, S.E., the stoc plant, and machinery of tile, mosaic, marbl and builders' merchants.

* JANUARY 26.—Messrs. Churchill & Sim wi sell by auction, at the Great Hall, Winchest House, Old Broad-street, E.C., an assortme of deals, battens, boards, timbers, etc.

* FEBRUARY 9.—**Tring (Herts).**—Messrs. J. Skelding & Co. will sell by auction, at the Tri Grange, Buckworth, Herts, brickmaking pla machinery, buildings, and stock of bricks.

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which revail at the present time, prices of materials hould be confirmed by inquiry.]

Since our last issue wood, metal, and lead prices have een increased.—Ed.

* Our aim in this list is to give, as far as possible, the *verage* prices of materials, not necessarily the highest r lowest. Quality and quantity obviously affect prices -a fact which should be remembered by those who ake use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
est Stocks	2	0	0
icked Stocks for Facings	2	15	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
lettons	1	16	0	BestBluePressed Staffordshire	3	15	0
est Fareham Red	3	12	0	Do. Bullnose	4	0	0
estRedPressed Ruabon Facing	5	0	0	Best Stourbridge Fire Bricks	4	0	0

lazed Bricks—

	£	s.	d.		£	s.	d.
est White, Ivory, and Salt Glazed Stretchers	13	0	0	D'ble Str'tch'rs	18	10	0
eaders	12	10	0	Double Headers	15	10	0
uoins, Bullnose and 4½ in. Flats	16	10	0	One Side and two Ends	19	10	0
				Two Sides and one End	20	10	0
				Splays and Squints	18	0	0

Second Quality £1 per 1000 less than best.

	s.	d.	
hames and Pit Sand	8	0	per yard, delivered.
hames Ballast	6	9	„ „ „

Per ton, delivered.

	£	s.	d.		£	s.	d.
est Portland Cement	2	5	0	..	2	8	0

Do. £2 1s. alongside in 80-ton lots.
errocrete 2s. 6d. per ton extra on above.

	£	s.	d.		
est Ground Blue Lias Lime	1	1	0	..	—

ote.—The cement or lime is exclusive of the ordinary charge for sacks.

rey Stone Lime 17s. 0d. per yard delivered.
ourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
ath Stone—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1	7
o. do. delivered in Railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1	8¾
o. do. delivered on road waggons, Nine Elms Depôt	1	9½

ortland Stone—

	s.	d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, L. & S.W.R., per ft. cube	2	5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½

White Basebed, 2d. per ft. cube extra.

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
ncaster in blocks	1	11	Red Corsehill in blocks	2	6
eer in blocks	1	7	Closeburn Red Freestone	2	2
eenshill in blocks	2	0	Red Mansfield Freestone	2	6
arley Dale in blocks	2	6			

ork Stone—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
appled random blocks	2	10
Per Ft. Super., Delivered at Railway Depôt.		
in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
in. rubbed two sides ditto, ditto	3	2
3 in. sawn two sides slabs (random sizes)	1	0
in. to 2½ in. sawn one side slabs (random sizes)	0	8
in. to 2 in. ditto, ditto	0	6½

ard York—

Per Ft. Cube. Delivered at Railway Depôt.	s.	d.
appled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
n. sawn two sides landing to sizes (under 40 ft. super.)	2	9
n. rubbed two sides ditto	3	3
n. sawn two sides slabs (random sizes)	1	2½
n. self-faced random flags	0	6

TILES.

Per 1000 f.o.r. London.	£	s.	d.
st machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2	12	6
namental ditto	2	15	0
p and valley tiles (per dozen)	0	5	6

SLATES.

Per 1000 of 1200 f.o.r. London.	£	s.	d.
st Blue Bangor slates, 20 by 10	11	16	0
st quality „ „	11	10	0
„ „ 16 by 8	5	15	0
st Blue Portmadoc, 20 by 10	11	13	6
st quality „ „	11	3	6
„ „ 16 by 8	5	15	0

WOOD.

st Building Redwood.

Imported sizes. Per standard.

	£	s.	d.		£	s.	d.
als: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	25	0	0	..	26	0	0
3 in. by 9 in., 2½ in. by 9 in. and 2 in. by 9 in.	24	0	0	..	25	0	0

WOOD (*Continued*).

Best Building Redwood. Per standard.

	£	s.	d.		£	s.	d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	22	10	0	..	23	10	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0				
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.			
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	8	10	0	..	Per load of 50 ft. cube. —		
Seconds do. do.	8	0	0	..	—		
9 in. to 10 in. do.	7	0	0	..	—		
6 in. to 8 in. do.	6	10	0	..	—		

Stocks very limited.

	£	s.	d.		£	s.	d.
				Per load.			
Sawn pitch pine logs (about 35 cu. ft. average)	9	0	0	..	9	10	0
Do. 6 in. to 10 in.	7	0	0	..	7	5	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	10	0	..	7	0	0
				Per standard.			
Best Pitch Pine Deals	34	0	0	..	35	0	0
Rio do.	23	0	0	..	25	0	0
Under 2 in. thick	0	10	0	extra.			

Joiners' Wood.

	£	s.	d.		£	s.	d.
White Sea First Quality Red:							
4 in. by 11 in.	35	0	0	..	36	0	0
3 in. by 11 in., and 2 in. by 11 in.	34	0	0	..	35	0	0
4 in. by 9 in.	33	0	0	..	34	0	0
3 in. by 9 in., and 2½ in. by 9 in.	32	0	0	..	33	0	0
9 in. by 11 in. boards	1	0	0	more than deals.			
7 in. and 8 in. battens	24	0	0	..	25	0	0
7 in. and 8 in. boards	1	0	0	more than battens.			
Seconds quality	2	0	0	less than best.			
Third quality	£2 to £3			less than seconds.			
Archangel White Deals—							
Best 3 in. by 11 in.	28	0	0	..	29	0	0
3 in. by 9 in. and 10 in.	26	0	0	..	27	0	0
Seconds, do.	1	10	0	less than best.			
U.S. Battens	19	10	0	..	20	0	0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	£	s.	d.		£	s.	d.
				Per square actual.			
1¼ in. by 7 in. planed and shot	1	5	6	..	1	10	0
1¼ in. by 7 in. planed and matched	1	6	0	..	1	10	0
1 in. by 7 in. planed and shot	1	0	0	..	1	3	0
1 in. by 7 in. planed and matched	1	1	0	..	1	4	6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0	16	0	..	0	17	6
1 in. by 7 in. do.	1	1	0	..	1	3	6
⅝ in. by 7 in. do.	0	13	0	..	0	14	0

6 in. at 6d. per square less than 7 in.
5 in. and 5½ in. at 6d. per square less than 6 in.

	£	s.	d.		£	s.	d.
				Per standard.			
Columbian or Oregon Pine, best quality	35	0	0	..	40	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.			
Oddments	39	0	0	„			
Seconds, regular sizes	43	10	0	„			
Oddments	37	10	0	„			
Kauri Pine—Planks per ft. cube	0	7	6	..	—		
Oak Logs—							
Large, per ft. cube	0	6	0	..	0	6	6
Small „ „	0	5	0	..	0	5	6
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super, as inch	0	1	0	..	0	1	3
¾ in. do. do.	0	0	10	..	0	1	0
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0	1	0	..	0	1	4
Selected, Figury, per ft. super, as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	6	..	0	2	6
				upwards.			
Dry Walnut, American, per super, as inch	0	1	0	..	0	1	3
French, "Italian," Walnut	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	5	0	..	21	5	0
Plain Compound Girders, ordinary Sections	22	0	0	..	23	0	0
Plain Compound Stanchions	23	0	0	..	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	..	21	10	0
Flitch Plates	20	10	0	..	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	..	14	0	0

(Turning extra.)

METALS (*Continued*).

Per ton, in London.

	£	s.	d.		£	s.	d.
Iron—							
Common Bars	16	0	0	..	—		
Staffordshire Crown Bars, good merchant quality	16	10	0	..	17	0	0
Staffordshire "Marked Bars"	17	0	0	..	17	10	0
Mild Steel Bars	16	10	0	..	17	0	0
Steel Bars, Ferro-Concrete quality, £17 10s. basis price.							
Hoop Iron, basis price	17	10	0	..	—		
„ „ Galvanised	30	0	0	..	35	0	0

(*And upwards, according to size and gauge.)

	£	s.	d.		£	s.	d.
Sheet Iron Black—							
Ordinary sizes to 20 g.	18	0	0	..	—		
„ „ 24 g.	19	0	0	..	—		
„ „ 26 g.	20	0	0	..	—		
Sheet Iron, Galvanised flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29	0	0	..	—		
Ordinary sizes to 22 g. and 24 g.	29	10	0	..	—		
Ordinary sizes to 26 g.	32	0	0	..	—		
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	30	0	0	..	—		
„ „ 22 g. and 24 g.	30	10	0	..	—		
Ordinary sizes to 26 g.	33	10	0	..	—		
Galvanised Corrugated Sheets—							
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28	0	0	..	—		
Ordinary sizes, 22 g. & 24 g.	28	10	0	..	—		
Ordinary sizes, 26 g.	29	0	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19	15	0	..	—		
Best Soft Steel Sheets, 22 g. & 24 g.	20	0	0	..	—		
Best Soft Steel Sheets, 26 g.	21	15	0	..	—		
Cut Nails, 3 in. to 6 in.	18	10	0	..	19	0	0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

		£	s.	d.		
Lead—Sheet, English, 4 lb. and up		38	10	0	..	—
Pipe in coils		39	0	0	..	—
Soil pipe		42	0	0	..	—
Compo pipe		42	0	0	..	—

Note—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.		
Copper—						
Strong Sheet	per lb.	0	1	5	..	—
Thin „	„	0	1	6	..	—
Copper nails	„	0	1	5	..	—
Copper wire	„	0	1	5	..	—
Brass—						
Strong Sheet	„	0	1	3	..	—
Thin	„	0	1	4	..	—
Tin—English Ingots	„	0	1	10	..	—
Solder—Plumbers'	„	0	0	10	..	—
Tinmen's	„	0	1	0	..	—
Blowpipe	„	0	1	2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	„ fourths	7½d.
„ fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	„ 21 oz.	6¾d.
„ fourths	6¼d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4¼d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	9
„ „ „ in barrels	„	0	3	10
„ „ „ in drums	„	0	4	1
Boiled „ „ in barrels	„	0	4	0
„ „ „ in drums	„	0	4	4
Turpentine in barrels	„	0	4	6
„ in drums	„	0	4	9
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	45	15	0
Red Lead, Dry	per ton	42	10	0
Best Linseed Oil Putty	per cwt.	0	10	0
Stockholm Tar	per barrel	1	12	0
Genuine White Lead Paint—"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	56	15	0

VARNISHES, &c.

Per gallon.	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to THE BUILDER LTD., and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PATENTS.

APPLICATIONS PUBLISHED.*

13,118 of 1914.—Henry Quilter: Construction of shuttering for moulding concrete or similar composite material, whether reinforced with metal or not.

15,346 of 1914.—John Parsons, jun., and Benjamin Claude Andrew: Scaffolding and the like.

23,651 of 1914.—Chester Arthur Finch: Adjustable drawing curves.

23,673 of 1914.—Hilliard Neil Alexander McLean: Cleaning of water-closet seats.

24,425 of 1914.—Nicola Maria Marinaro: Step ladders.

909 of 1915.—William Frederick Baldwin: Machines for sweeping roads and other surfaces.

2,617 of 1915.—Robert Grabowsky: Furnace walls.

4,585 of 1915.—John Horace Bowden and Henry Francis Jackson Thompson: Protection of electric cables.

5,105 of 1915.—Carl John Frederik Ohlsson: Self-contained shops, kiosks, and the like.

10,007 of 1915.—Joseph Southall: Machines for mixing concrete and other materials.

10,051 of 1915.—Waygood-Otis, Ltd., and Robert Falkland Carey: Safety appliances for lifts.

11,364 of 1915.—Richard Whalley: False-grate or fuel-economiser for domestic fireplaces.

11,495 of 1915.—Reginald Haddan (Barry Company): Shaft hangers or stands and journal-boxes therefor.

11,520 of 1915.—William Philpot Curran Bain: Wire fencing.

13,810 of 1915.—Andrew Edward Ruth: Ratchet wrench for engaging nipples and the like.

15,753 of 1915.—Carl Lorens Carlson and Grunnar Bergstrom: Apparatus for ascertaining the direction of bore-holes.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

AUCKLAND.—Accepted for the erection of a new engine-house at the waterworks, for the Urban District Council:—

Joiner's Work: T. Manners	£189	15	0
Electric Lighting: D. Latham & Co.	36	0	0
Plastering: S. Kirby	30	0	0
Slating: J. Maskall	51	0	0
Painting and Glazing: J. Cottrell	16	12	6

BIRMINGHAM.—Accepted for the erection of temporary generating-station at Nechells, for the Electric Supply Committee:—

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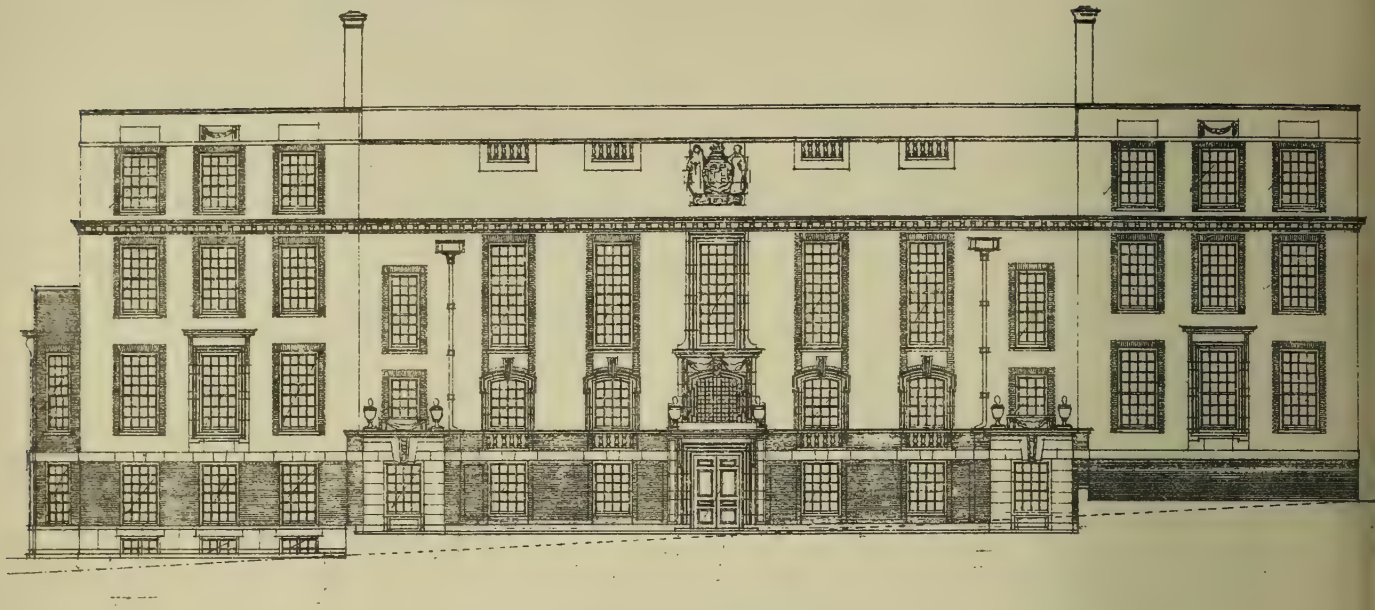

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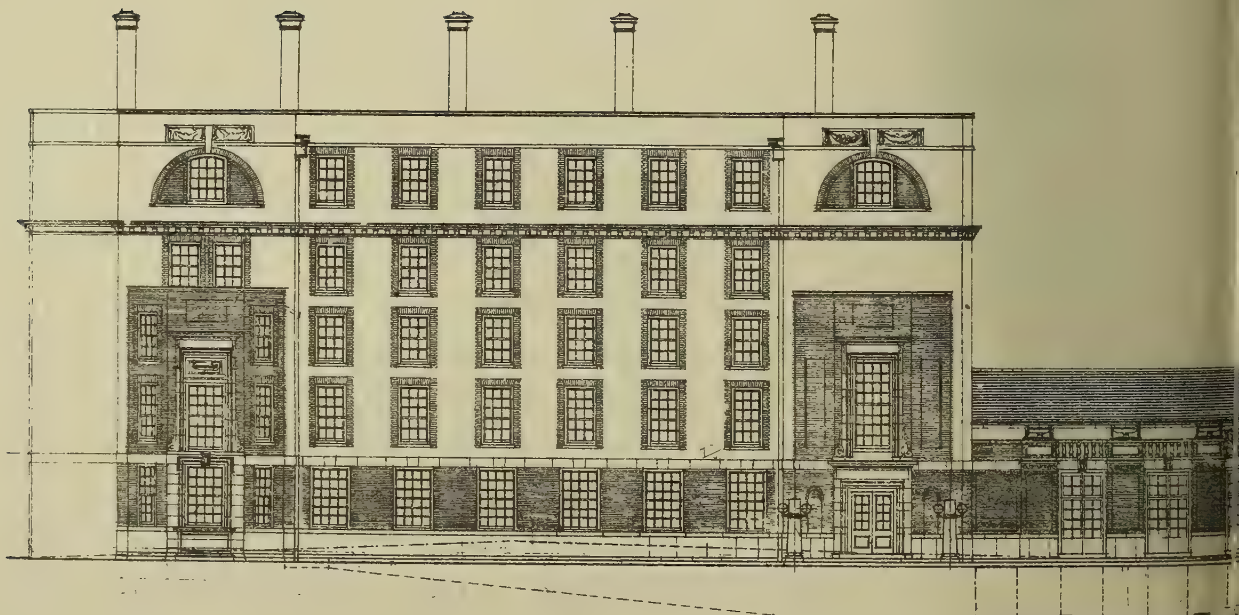

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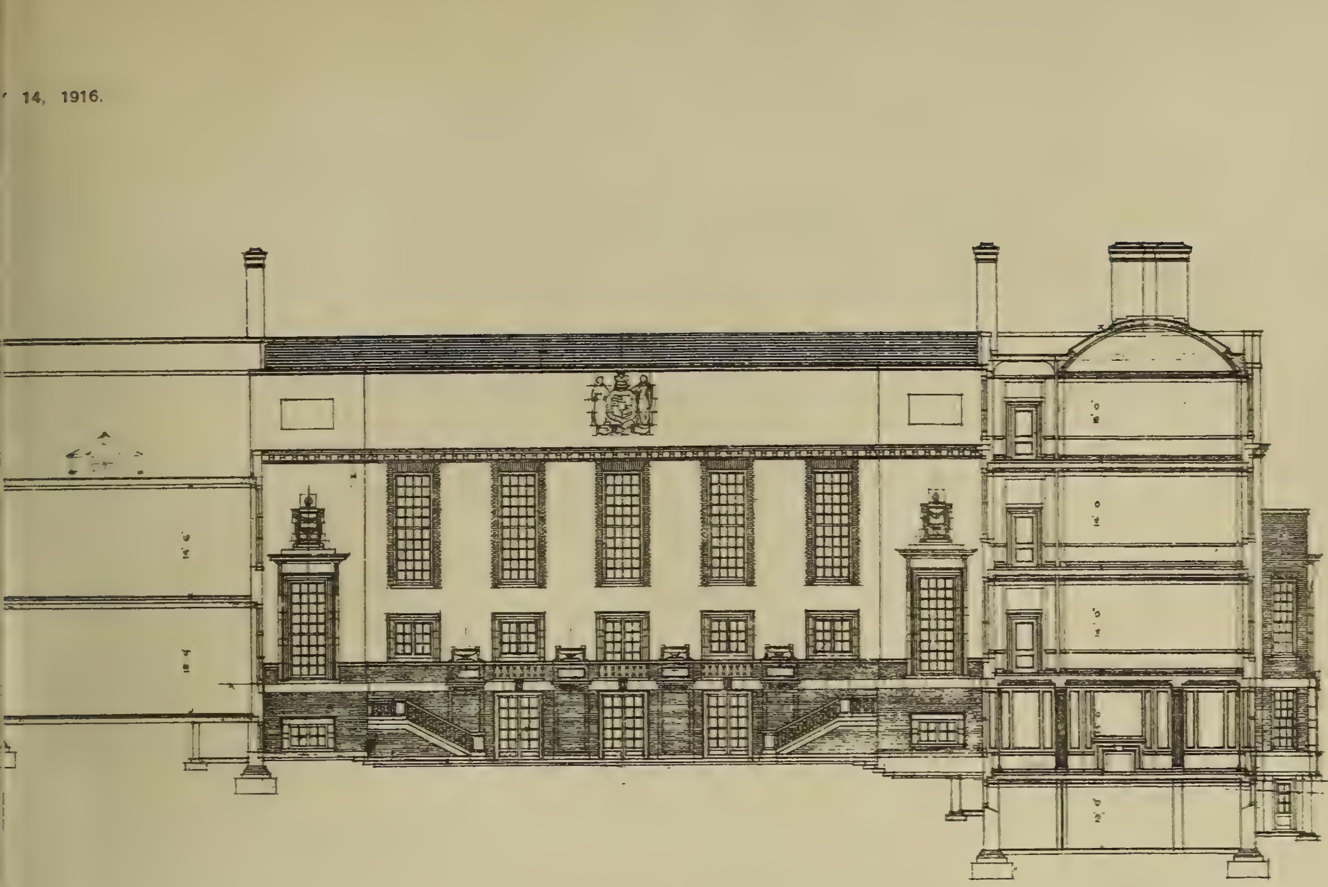

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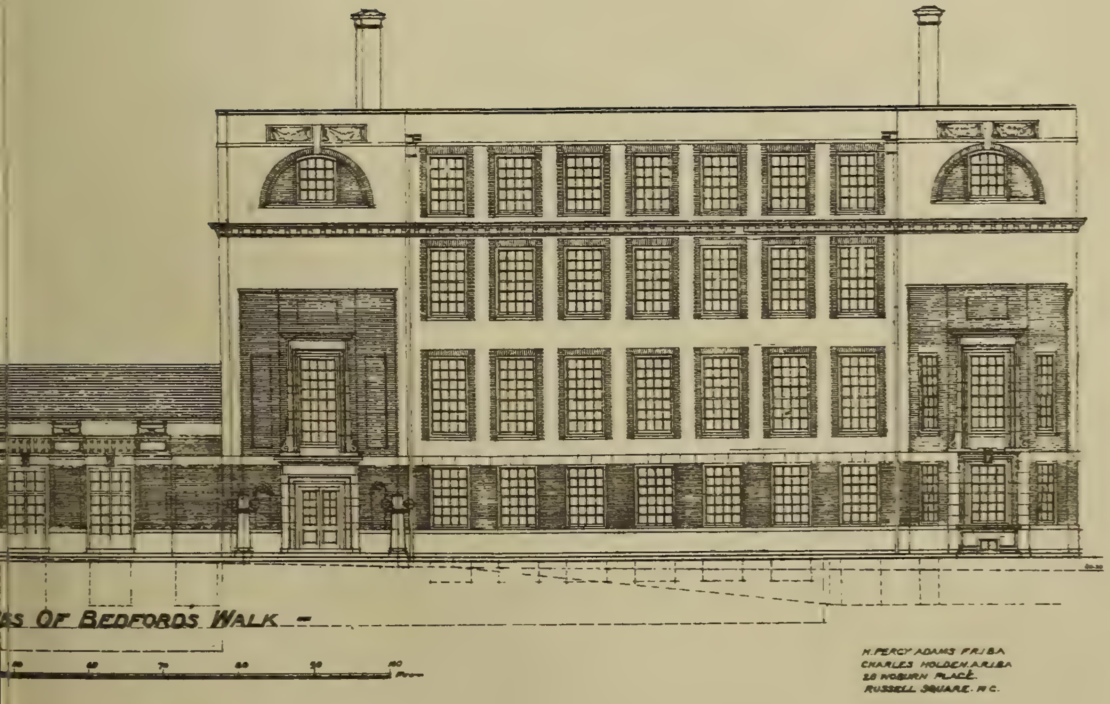

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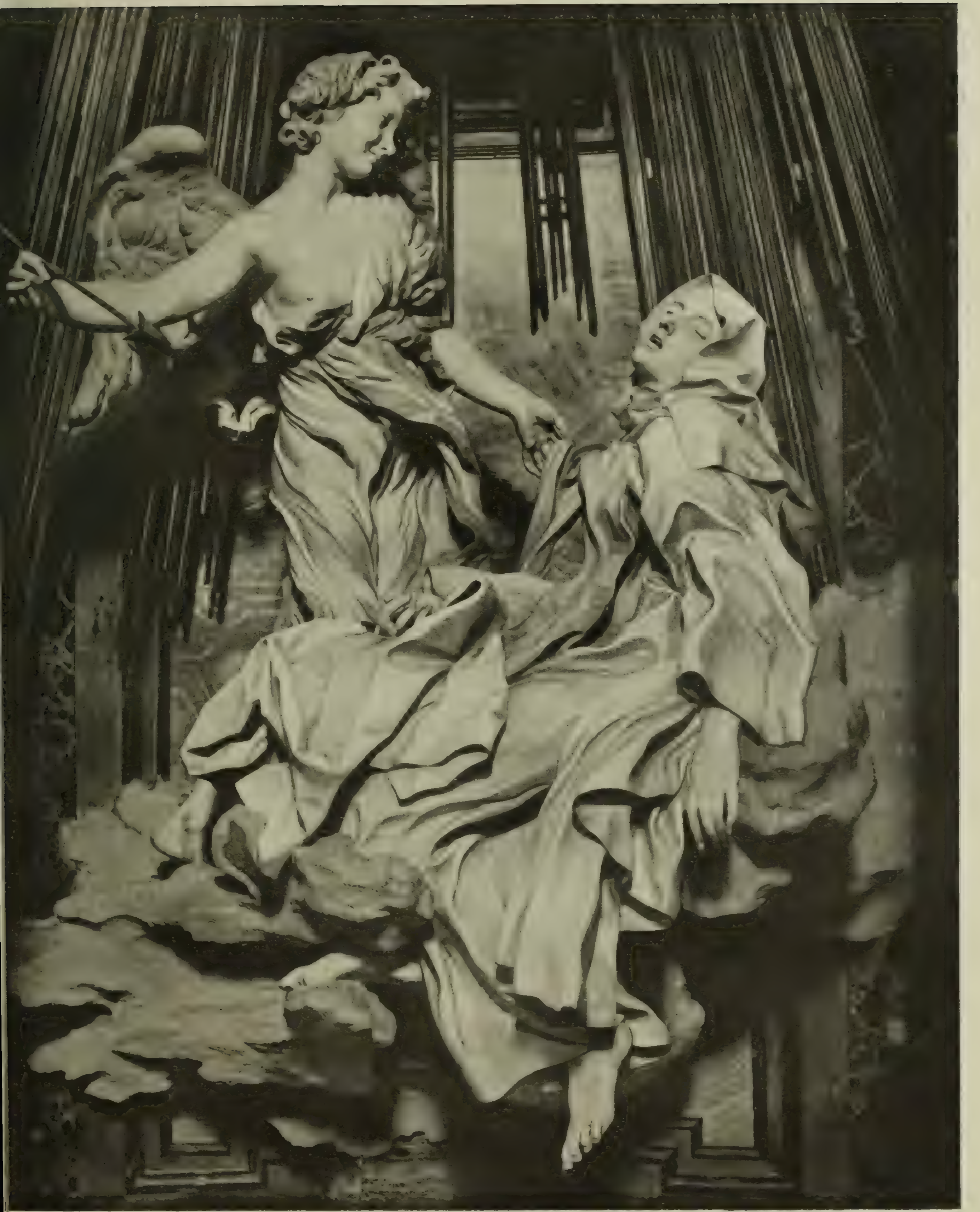

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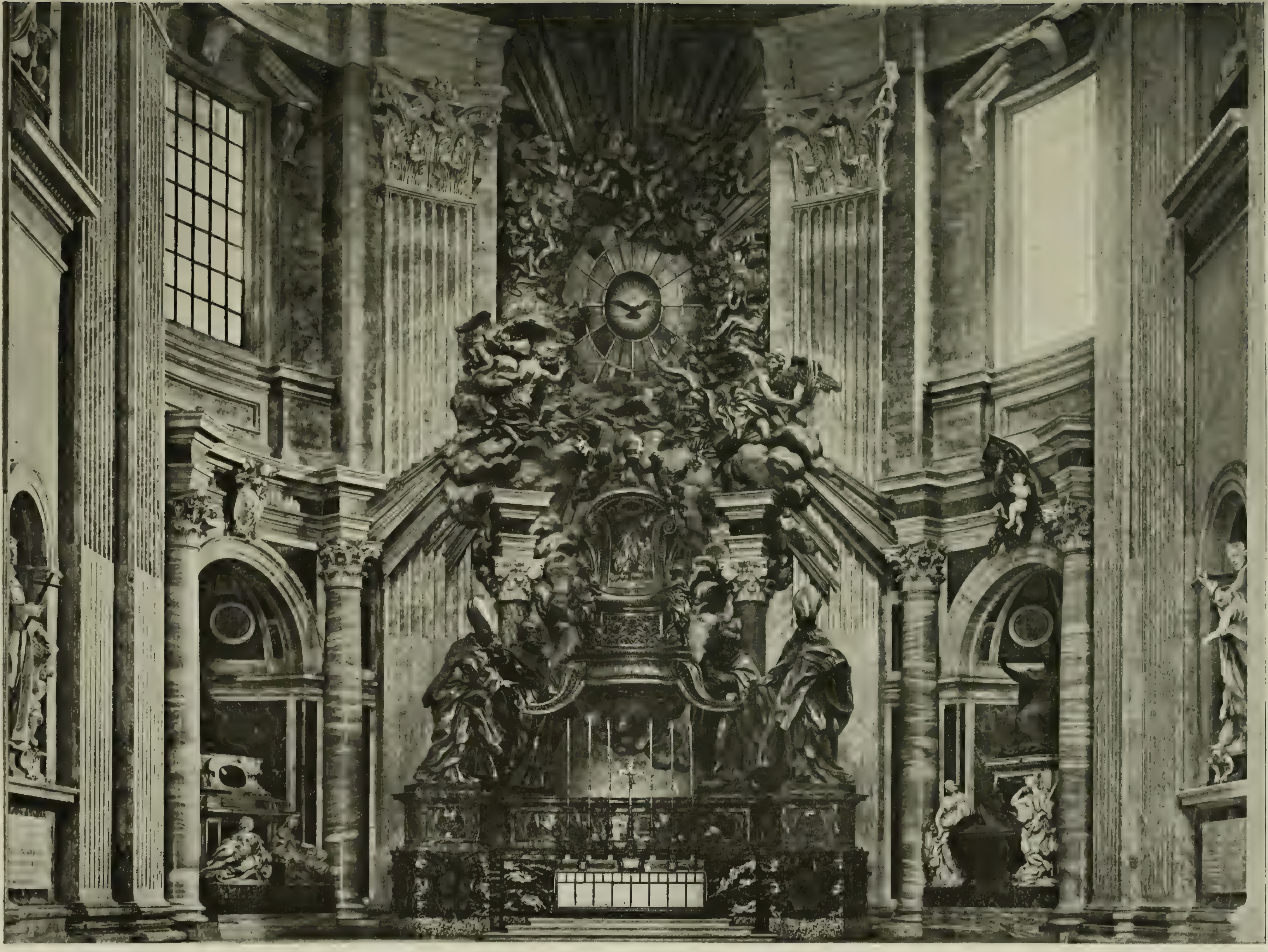
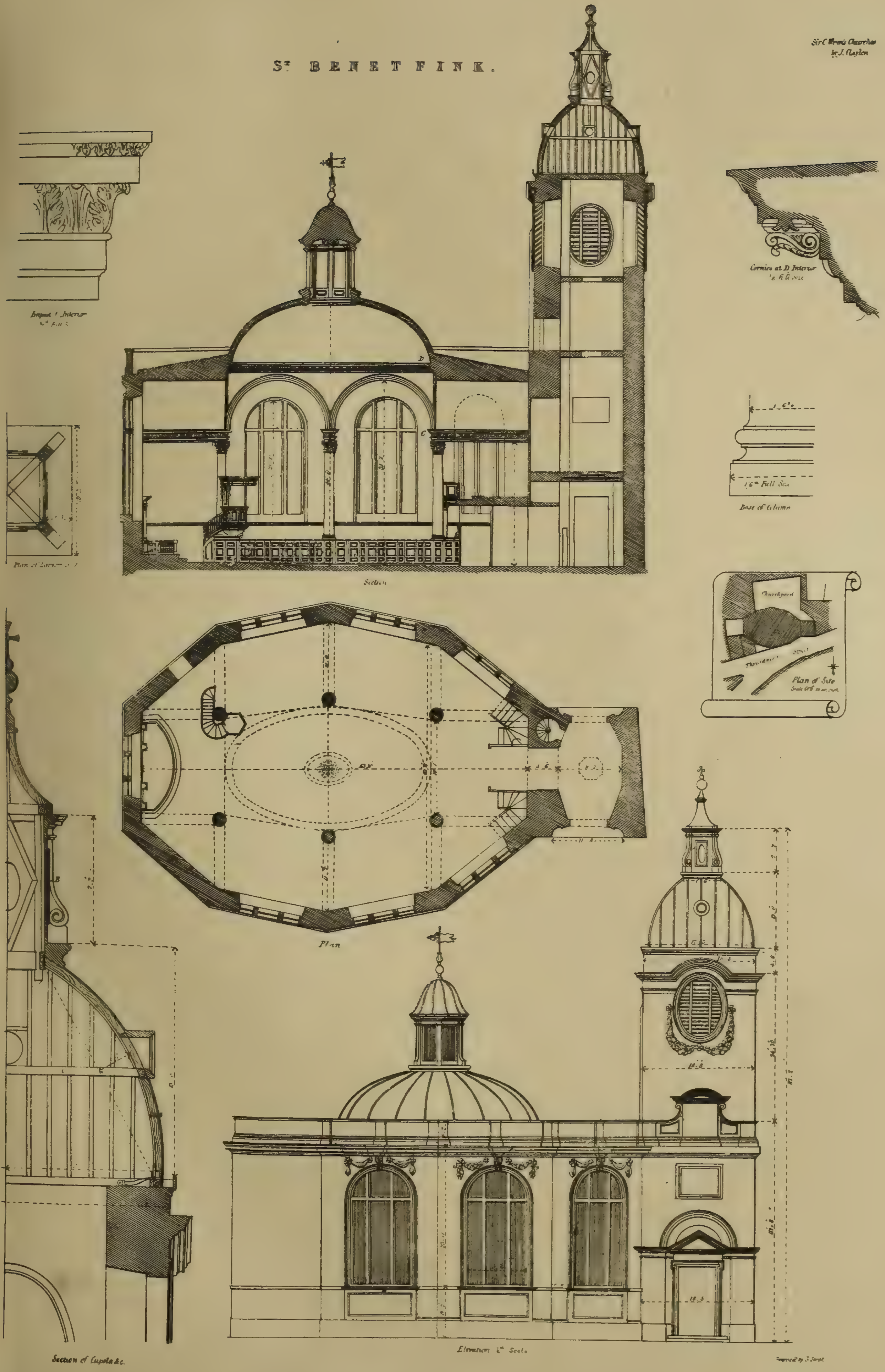
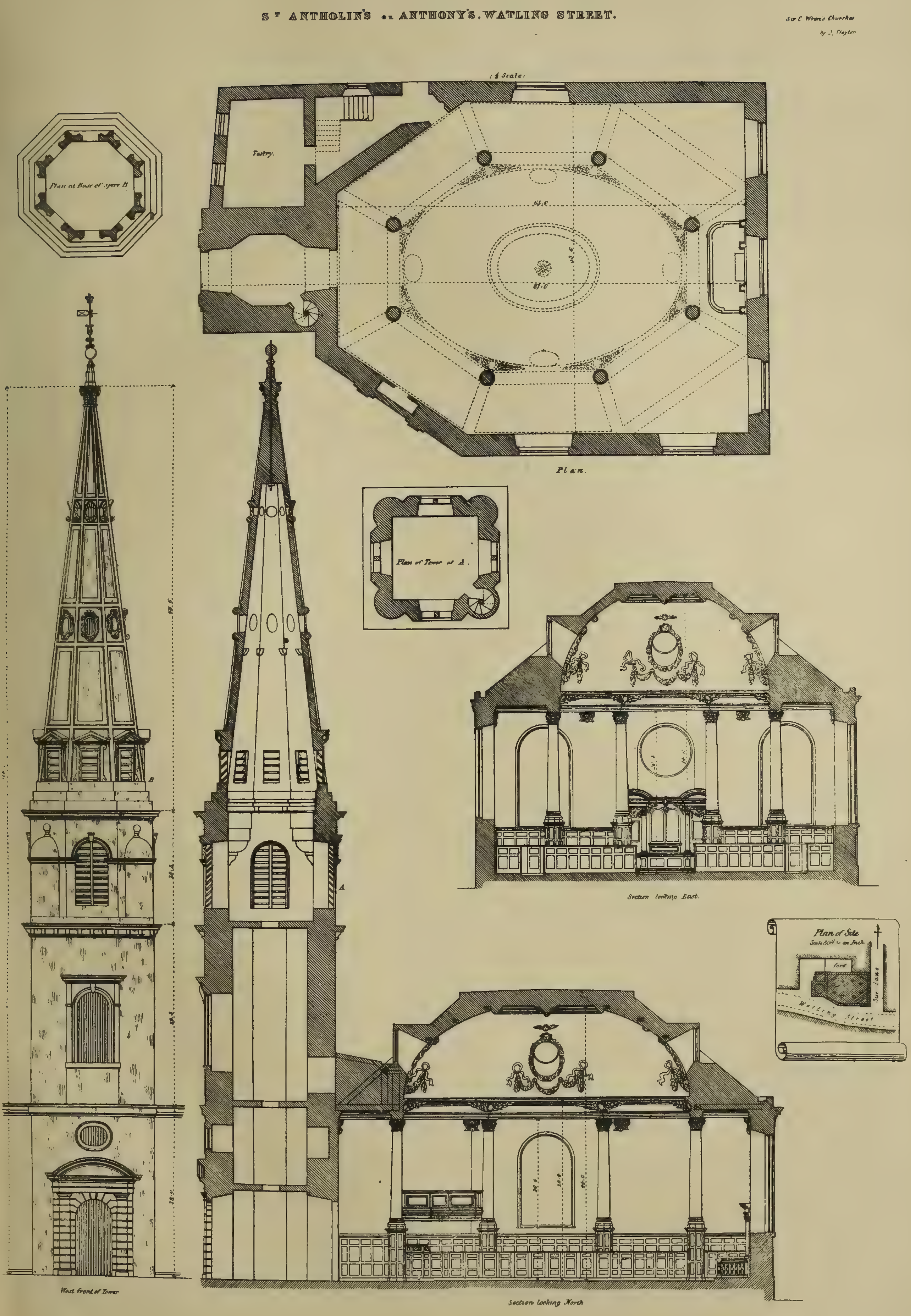


BERNINI'S CHAIR OF S. PETER (1656-1665). S. PETER'S, ROME.



WREN'S CHURCHES: ST. BENET FINK. (NOW DEMOLISHED.)



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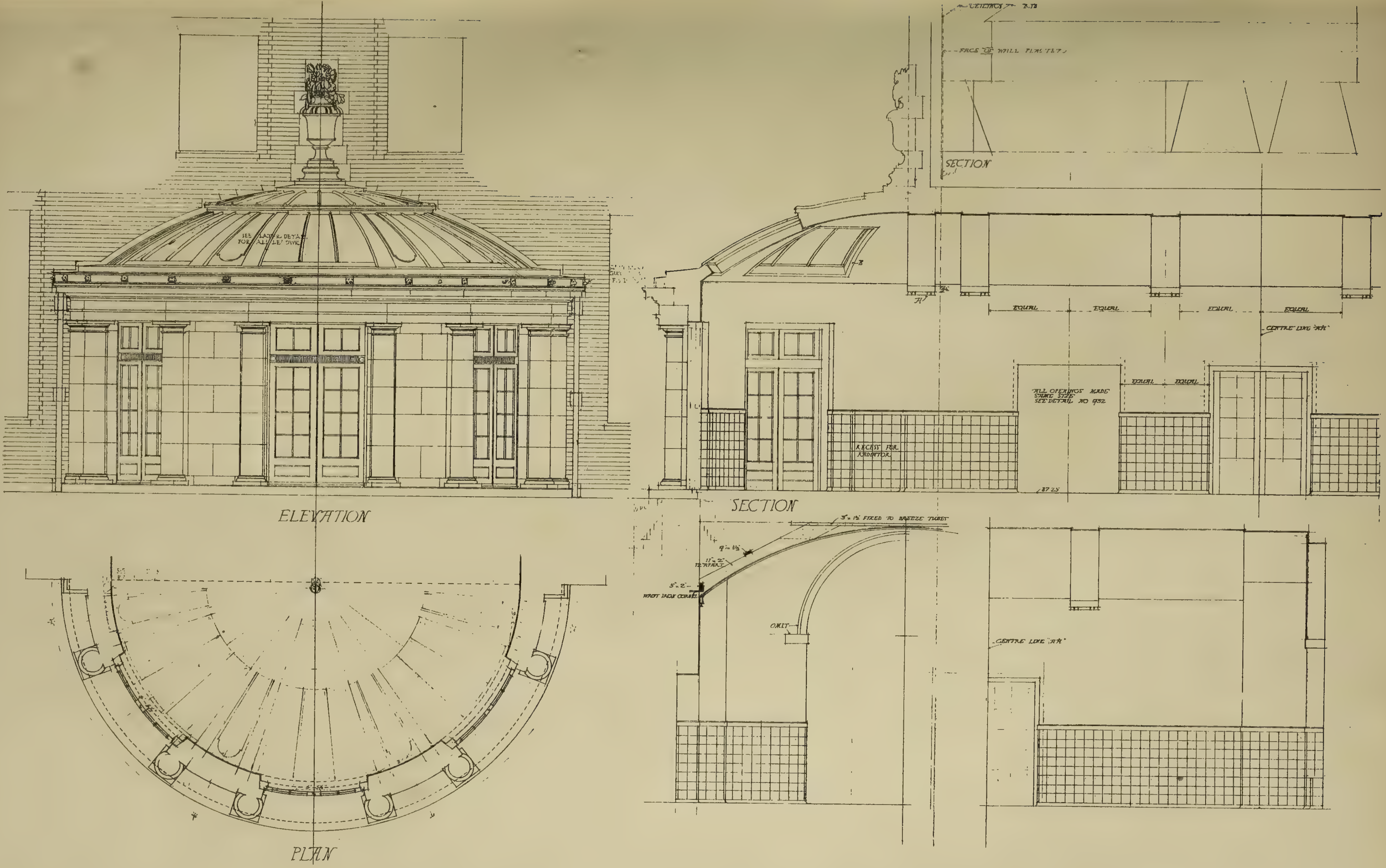
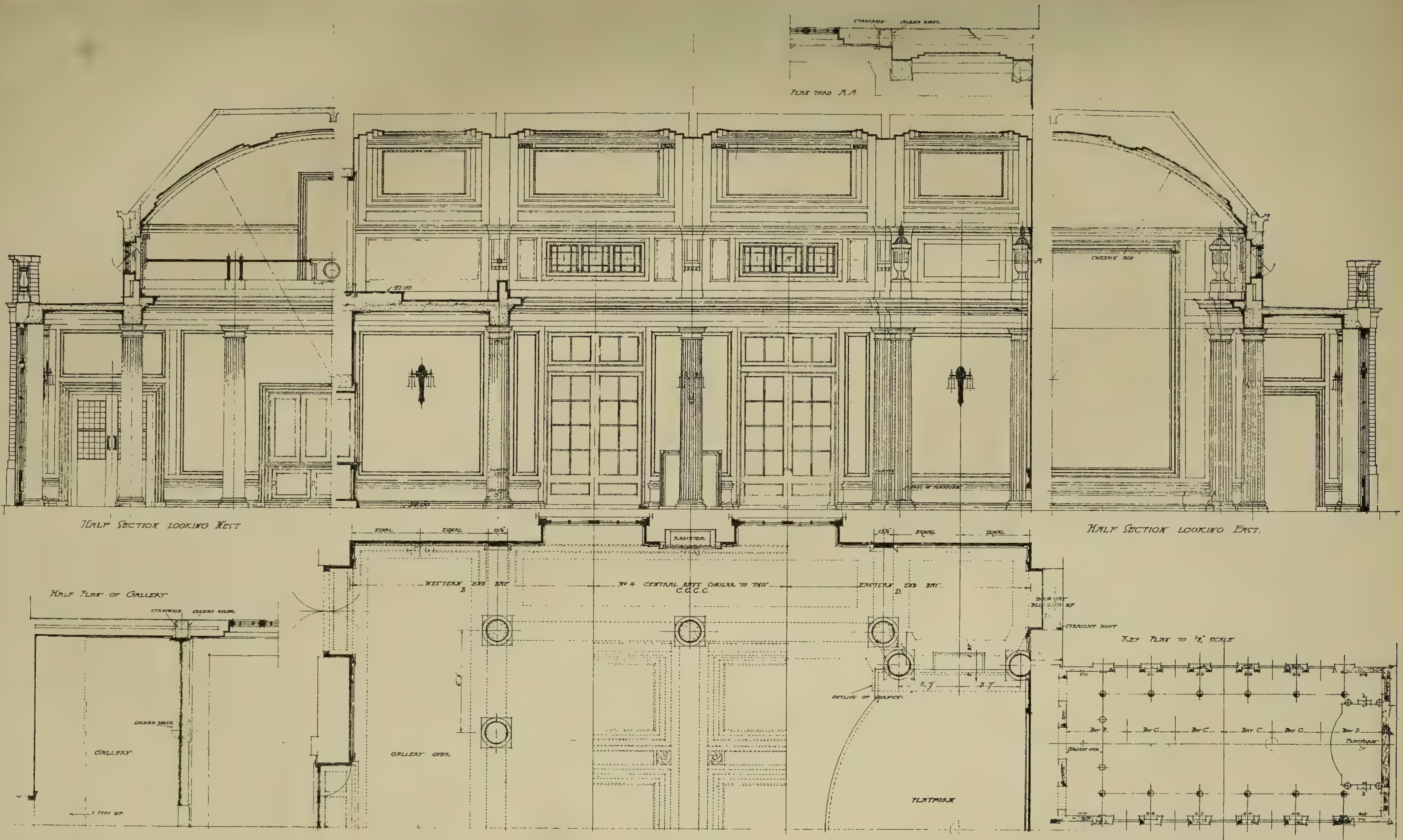


KING'S COLLEGE FOR WOMEN: DETAIL OF BAY TO TEACHING KITCHEN.

MESSRS. H. PERCY ADAMS AND CHARLES HOLDEN, ARCHITECTS.



KING'S COLLEGE FOR WOMEN: HALF-INCH DETAIL OF FINISHING TO REFECTORY.

MESSRS. H. PERCY ADAMS AND CHARLES HOLDEN, ARCHITECTS.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3807. JANUARY 21, 1916.

THE MONUMENTS OF OUR PROVINCIAL TOWNS:

I.—LIVERPOOL.

THERE cannot be the slightest doubt that a magnificent pile of buildings, like a man with a great personality, is always a dominating factor. Not only is this felt in the immediate surroundings, but in the case of a building it sets, as it were, the keynote for the architecture of a whole city.

Elmes's masterpiece has precisely this effect in Liverpool. Whatever sculpture or architecture appears in the streets must be able to bear comparison with that noble pile or it will be unworthy of its position. St. George's Hall has Greek purity and scholarly refinement. It shows originality both in the massing and the detail, besides having attained a largeness of scale for which it is justly praised. Such a work, forming as it does an architectural tradition, is possibly the reason why Liverpool has many more monuments, and that they show, upon the whole, finer design than is the case in the majority of our provincial towns.

The oldest group—an equestrian statue of George III.—dates from 1810; the latest is either the Florence Nightingale, erected in 1911, or the Sir Lewis Jones, which is undated. Between the dates of these two are about twenty other groups, giving examples of the work during the whole of last century and of the first ten years of the present one, which vary greatly in merit, and unfortunately cannot be said to show a record of continual improvement. This is particularly pronounced with regard to the architectural portion and in the conception of the general scheme. The monuments are placed in various parts of the city, many of them in isolated positions; a considerable number are, however, in the immediate vicinity of St. George's Hall, either in St. John's Gardens, which are behind, or on the St. George's Plateau, which is in front.

The first to claim attention, because by period and scale it maintains the standard of the central building, is the columnar design commemorating the victories of the Duke of Wellington. This stands at one end of St. George's Plateau. Its position makes it appear to some extent disconnected, and a careful study of the site prompts the somewhat dangerous suggestion that two columnar monuments might, in this instance, have been a success, one being placed at either end, marking the boundary of the lay-out. The companion could have been erected to the memory of Nelson. Such a scheme may find a precedent in the dual obelisks of the Egyptian temple front.

But to return from possibilities to facts. The column which exists has many good points. The proportion of the shaft and the scale of the figure both seem to be satisfactory. The Doric Order is adopted, and its sturdy outline gives it a great advantage over the more slender Corinthian of the Nelson Column, which is so frequently condemned by the Londoner. The base consists of a square die ornamented with a bas-relief on each of three faces and the inscription on the fourth. Its broad simple surfaces maintain the strength of the rest of the scheme, and its connection with the column is managed with an ease and straightforwardness which are admirable. The pedestal upon which the figure stands, from the abacus upwards, is perhaps the only weak point.

Coming from this group to the statues which adorn the space in front of the Hall, a great difference is felt in the quality of work displayed. Unconsciously it is realised that there is a vast gap between highly-accomplished architecture and mediocre sculpture.

Three statues are placed in front of the building at this point—one to Queen Victoria and one to the Prince Consort, both equestrian groups, and a standing figure to Earl Beaconsfield. The two first were designed by Thomas Thorneycroft—Queen Victoria in 1869 and the Prince Consort in 1866. Both are stiff in modelling, and show the lack of life and bald commonplace handling which was only too common among nineteenth-century sculptors. The monument to Queen Victoria is the better of the two. It unmistakably shows, however, the difficulty experienced in portraying modern dress in sculpture. The riding-habit, from the near side, is uncomfortable enough, but from the far side, showing as a shapeless mass of bronze below the underside of the horse, it looks clumsy in the extreme. The figures of both monuments are in bronze and the pedestals in grey granite.

Disraeli, Earl of Beaconsfield, was modelled by C. B. Birch, A.R.A., in 1883, and is not above the level of its companions. The pedestal, in this case in red granite, illustrates a tendency which seems to exist in the minds of English artists to make the material of a new group different from that used in existing ones. In order to weld the three into a homogeneous composition it would have seemed natural to use grey granite and bronze in each case.

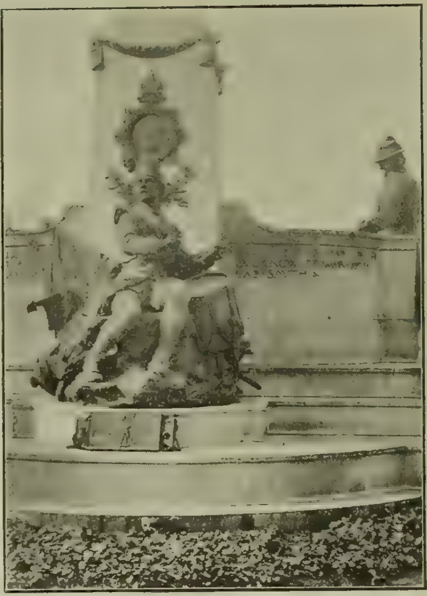
All three statues, by comparison with the architecture behind, seem small in conception and weak in execution. They occupy a position which in all probability might have been chosen by Elmes as a suitable place for sculpture, and it seems a pity that so fine a site should not have more worthy groups to adorn the forecourt of his building. The lions which occur in front of these groups are better than the monuments, but as purely decorative sculpture they do not come under the heading of the present article.

At the back of the Hall a scheme of public gardens, now adorned with a number of statues, was laid out in 1904. The grouping of statuary in open spaces of this sort, surrounded by floral lay-outs, green trees, bushes, and lawns, is most praiseworthy. The sculpture gains an ideal element by its association with the works and productions of nature which it could obtain from nothing else. Each group has an interest of its own, and, although many statues may be placed in close juxtaposition if the ground is judiciously planted, they do not appear as a crowd of men elevated upon posts, which is sometimes the case when a large number of monuments are placed in a public square devoid of all verdure.

The most striking feature noticed upon entering St. John's Gardens is the type of architecture adopted in the design. Ordinarily it would have been taken for granted that the whole scheme should follow the lines of the adjacent structure and a Greek garden lay-out or at least Classic detail be adopted. But here is found the freest of free renderings of so-called English Renaissance, with a long bird-nosed ogee moulding very much in evidence. Nothing could have been more out of keeping or more foreign to the older work, and that such a thing should have been allowed shows again the need of artistic censorship.

The centre of the garden is occupied by two groups placed one in front of the other. This system of placing has the

Wellington Monument.



The Back of the Monument to the Liverpool Regiment.

Detail from the Queen Victoria Monument.

unfortunate result of putting the two in competition and detracting from both. Instead of this, one large dominating group, or two groups placed in sympathetic positions, should have been employed. In the illustration the monument to the Liverpool Regiment is seen in the foreground. The figure on the Gladstone Monument can be discerned in the distance.

The Liverpool Regiment group, the work of Sir William Goscombe John, has several original features and also some excellent detail. The trophy, consisting of a standard, palm-leaf, helmet, and accoutrements, is a very clever piece of modelling of a difficult subject, and is only equalled by the drummer-boy behind. This drummer-boy is a truly brilliant piece of work, showing vigour and realistic representation, coupled with a fine decorative feeling which is only too rare in English sculpture. While, however, in detail such fine features exist, the composition as a whole seems to lack cohesion, and the bronze-work to be applied to the stone in various positions without any sufficient and reasonable connection. The figure of Victory proclaiming peace is hardly up to the high level of the rest of the design.

This difference between the standard attained by the detail of the sculpture and that of the design of the group as a whole is constantly seen. Time after time such a discrepancy occurs, and suggests that if an architect were called in first to prepare a scheme, or were commissioned to work with the sculptor, many English monuments would become works of art worthy of the highest rank among contemporary productions.

The Gladstone Memorial, by Sir Thomas Brock, also shows some good modelling. It is a type of group found fairly frequently, and in the disposition of its parts is based upon the triangle. In the centre and upon the top is a standing figure of Mr. Gladstone in bronze; below, on either side, are two seated figures, also in bronze. The three together form the key of the composition. Some of the architectural detail in this group seems a little heavy, and there are rather too many mouldings of a somewhat ordinary type, but otherwise the group reflects credit both upon its designer and its position.

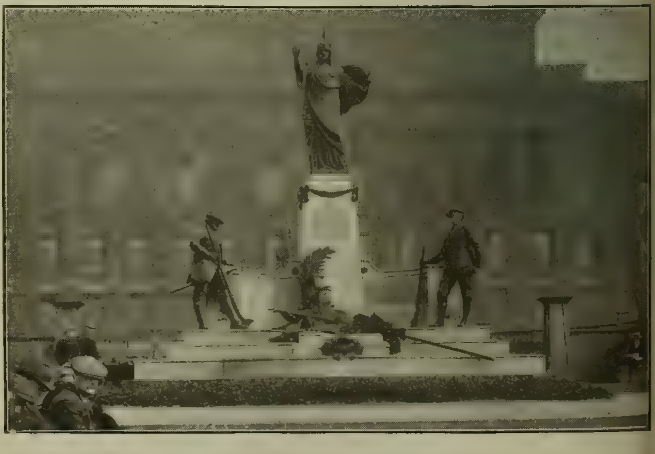
Of the remainder of the statues here two immediately behind St. George's Hall are both by Sir George Frampton. One commemorates William Rathbone, and was erected in 1899, and the other, the Right Hon. Sir Arthur Bower Forwood, erected in 1903. Both were public men connected with the City and had a local reputation which well justifies their commemoration.

The William Rathbone is by far the finer statue. Probably by virtue of his connection with the University, he is portrayed in Doctor's robes, and these have enabled the figure to receive a breadth of treatment, strength of outline and modelling which raise it well above the ordinary level.

As was noticed in the case of the monument to the Liverpool Regiment, the architecture is much below the standard of the sculpture, and it is a matter of wonder that the type of weak, insignificant moulding found in the garden walls is adopted in preference to the fine breadth and pureness of outline of the building behind. Sir Arthur Bower Forwood is portrayed in the conventional frock-coat, and, probably on account of the difficulty invariably experienced when it is employed, the group only achieves a moderate level of interest. It is somewhat strange, however, that, although the two groups occupy symmetrical positions, not only should the detail of the two pedestals vary, but that one should have been executed in what is apparently white Portland stone and the other either in brown Portland or a fine-grained brown sandstone. At any rate, the colour of one is the familiar green-stained white of the Portland pedestal under a bronze figure, the colour of the other a nondescript pale brown.

Besides those already mentioned, there are in St. John's Gardens monuments to Monseignor James Nugent, by F. W. Pomeroy, erected in 1905; to Alexander Balfour, by A. Bruce Joy, erected in 1889; and to T. Mayor Lester, by Sir George Frampton, erected in 1907. None of these call for special mention. They are standing bronze figures upon stone or granite bases. That to Monseignor Nugent is perhaps the most interesting.

Before leaving this group of monuments mention may be made of the fact, which is perhaps purely coincidence, that nearly all possess long inscriptions or several panels containing words and phrases which, added together, amount to the same thing. Unless there is some special reason for their inclusion



Monument to the Liverpool Regiment.

in the design, many of these wordy epistles do nothing to add to the interest of the monument, rather do they detract, since, if it is necessary to excuse the existence of the statue by a list of the man's claims to immortality, it were better not erected, The difficulty frequently is that the subscribers to the fund or the personal donor, as the case may be, have an intimate acquaintance with the subject. These words or sentences convey to them definite meaning and awaken memories of the worker whose voice has become still for ever. But the statue is viewed by thousands who have never known the individual alive and to whom the sculpture must be left to conjure up a picture. If it is sufficiently vivid a portrayal, not alone of his features but of his personality, his name, the dates of birth, death, and of the erection of the statue, with perhaps a statement of the field in which the man's work lay, should be all that is required. One instance of these long inscriptions may be quoted from the monument of Monseignor Nugent. There are four faces.

On the first face :—

Monseignor James Nugent, 1822–1905.
Save the boy.

On the second face :—

Erected by public subscription.
Unveiled 8th December, 1906.

On the third face :—

His words :—
"Speak a kind word.
Take them gently by the hand.
Work is the best reforming and elevating power.
Loyalty to Country and to God."

On the fourth face :—

An eye to the blind, a foot to the lame.
Father to the Poor.
The Apostle of Temperance.
The Protector of the Orphan Child.
The Consoler of the Prisoner.
The Reformer of the Criminal.
The Saviour of Fallen Womanhood.
The Friend to all in Poverty and Affliction.

Much of this is quite pointless without supplementary knowledge.

[*To be continued in our next issue.*—ED.]

◆

NOTES.

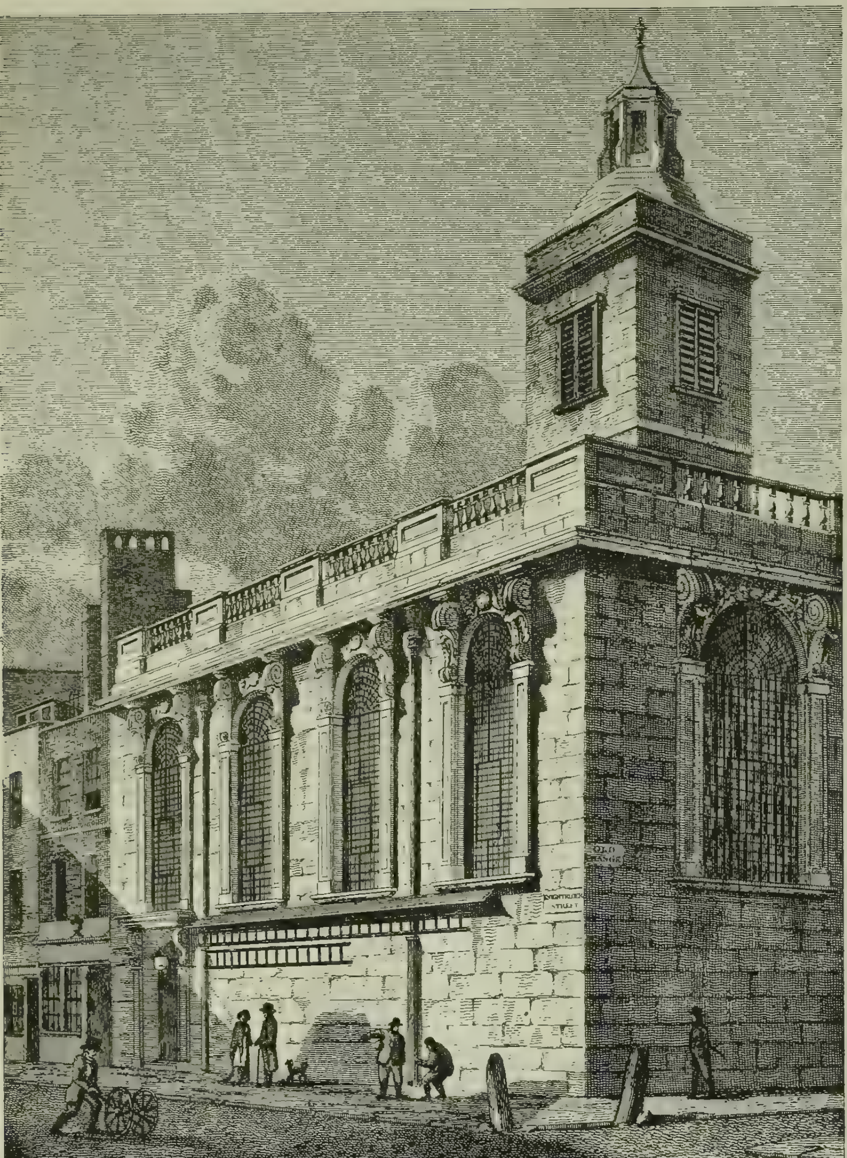
The Possibilities of Peace. IN the normal times of peace, when any great improvement in our towns of social life is suggested we usually hear the comment "We can't afford it," and we see the best things relegated to the region of the impossible. Yet we have been at war for nearly eighteen months, and in that time have spent daily in war an amount which would have sufficed to pay for St. Paul's Cathedral twice over. Had it ever been suggested to us that we should spend five million pounds in one week in improvements of our towns, in afforestation, or the provision of new roads and commercial waterways, we should have said that anyone who had suggested it was an impossible idealistic crank. Yet we know by actual experience that, given necessity, we can do what was previously considered impossible; and it were well that we should remember it when peace comes once more. We have been told by reformers that the expenditure in preparation for war was a waste of the national resources; yet that expense, if it obviated war, would be a drop in the bucket compared with the cost of war itself, and so the cost of preparation to combat the evils of civilised life, ill-health, ignorance, and the waste of effort —and we may add the consequent want of happiness of a large part of the population—may prove infinitely small in proportion to the advantages to be gained by a policy of wide liberality. Only to those who are utterly without imagination will the evils of modern life appear inevitable after the awakening of war.

War and Economy. THE St. Pancras Guardians have, we learn, decided on the following economies :—(1) Single instead of double sheets of notepaper; (2) firebricks in open grates; (3) coal mixed with coke; (4) to chop their own firewood; (5) medium-weight cloaks for nurses, to serve for summer and winter alike. As to the last, we presume the Guardians are satisfied that the interests of economy are really served by nurses having clothes which are not warm enough in winter and too warm in summer, for that seems to be the inner meaning of the economy. With regard to the half-sheets of notepaper, we imagine no one will be worse off, though autograph-hunters will find the cherished signatures spread over a smaller space; however, the literary style of the writers may be improved by greater terseness and brevity. The firing economies are more to the point, but all the little items recorded are at once eloquent of the real desire to save and examples of the difficulty of the process.

Professional Organisation. A SERIES of lectures on Professional Organisation, to be given by Mrs. Sydney Webb at the London School of Economics, should be of unusual interest at the present moment. On all sides we hear of our lack of national organisation. This defect is apparent, we are told, in our Government, our commerce, and our science, and now it seems to be inferred that it is present also in our professions. Mrs. Webb will deal, in turn, with such professions as Medicine, Teaching, Engineering, Accountancy, and Architecture. Whatever may be the case of other professions, there is little doubt that architecture, whether regarded as an art or as a profession, has a good deal to gain by better organisation, and we shall be interested to hear what so great an authority as Mrs. Sydney Webb has to say on the subject. If it is true that we all have to put our houses in order if we wish to hold our own after the war, the sooner we begin the better. We are all for concentrating national energy on winning the war; but those of us who are prevented, possibly by this very lack of national organisation, from using the whole of our energies in this direction might well devote what surplus remains to this important question. The Selection Committee of the Architects' War Committee appear to have made a start in the right direction with their analysis of the special qualifications of members of the profession, and we hope that the idea will not be altogether abandoned when the war is over.

Wren's Mistake. WE learn from an evening paper, if the information be correct, that the instability of the dome of St. Paul's, which is causing the Cathedral authorities trouble, is mainly the result of a change of plan which was not carried far enough. The original design—by which we presume the Warrant design is meant—provided for a smaller and lighter dome; but when the present massive dome was substituted Wren decided that the piers designed for the "discarded" dome were strong enough for the heavier one, and made no alteration in the "foundations." The Portland stone piers, instead of being solid, are hollow and filled with rubble, hence the subsequent trouble. We think fact and fiction are about equally mixed in the statements we repeat. Wren may have intended a lighter dome or not if he had wanted to carry out the steeple surmounting the shallow dome shown in the Warrant design. We imagine his skill as a constructor would have been more exercised than it was by the problem he actually solved, since the weight of the enormous centre feature would have greatly exceeded that of the present lantern; nor is there room in the design for the core of brickwork which carries the lantern. It is likely that Wren's task may have been made more difficult by architectural improvements he made in execution, which added to the weight to be carried; but the main point is that a dome, if not constructed on the principle of horizontal courses succeeding one another without weight at the apex of the curve, must always be in a state of greater or less unstable equilibrium, and the material resources of the time did not permit of those expedients which are in the hands of the builders of to-day. Most great buildings look the embodiment of eternity, while they are the battleground of opposing forces, the action of which is always tending towards destruction.

The Pastel Society. THERE is a great deal of good and interesting work at the Pastel Society's Exhibition now being held in the Galleries of the Royal Institute of Painters. Mr. Herbert Draper's two portraits—No. 11, "Betty," and No. 13, "Yvonne"—are good. Mr. Lewis Baumer sends four dainty and spirited drawings entitled "The Blue Dress," "Pierrot," "The Pink Dress," and "Columbine" (Nos. 22-25). "L'Institut de France—Night" (No. 36) is a clever impressionistic study by Mr. Terrick Williams, R.O.I. Mr. Arthur Wardle's studies of animals, Nos. 55-60, are masterly in their vigorous expression of life. Mr. S. Melton Fisher sends a charming study in No. 63, "A Sleeping Girl," which is one of the best things in the Exhibition. We like Mr. J. Barnard Davis's work, Nos. 87-90, consisting of country subjects in Buckinghamshire, and showing much refinement and sense of colour. No. 100, "Crossing the Dunes," by Miss Maude Harris, is a powerful study of two Dutch women, portrayed with much realism. Mr. Thos. F. M. Sheard, R.B.A., sends three interesting studies from Arab cities in the desert. Mrs. Burn-Murdoch's "Foxgloves" (No. 124) gives a pleasing effect of colour. Mr. Bernard Partridge sends two admirable figure sketches entitled "Studio Studies" (Nos. 155 and 156). Mr. Wynford Dewhurst sends a series of his characteristic work in landscape, Nos. 184-189. Mr. P. Harland Fisher's two portraits, No. 200 ("Major G. T. Kelly") and No. 201 ("Mrs. George Kelly"), are excellent. Miss Sarah Challice Constable's landscape studies are very pleasing, especially No. 229 ("On the River at Wareham"), No. 231 ("A Pool on a Dorsetshire Common"), and No. 232 ("Corfe Castle"), and we like Mr. Edward H. Chetwood-Aiken's "Afterglow—Holland" (No. 246). The general level of the Exhibition is a high one.



St. Mary Magdalen, Knightrider-Street.

From an engraving by J. Booth, 1812.

THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. IV.—St. Martin, Ludgate-Hill.

St. Martin is one of the most successful of Wren's designs, and is particularly well suited to a position in which it is frequently viewed silhouetted against the mass of St. Paul, the slenderness of the lead steeple forming a pleasing contrast to the greater bulk and more rounded outlines of the western campaniles of the Cathedral. The church which previously stood on the site is stated, by Stow, to have been rebuilt in the reign of Henry VI., and in it was a monument to William Sevenoake, who was Lord Mayor in 1418, and whom legend connects with the town of Sevenoaks, where he is said to have founded a hospital and school.

The present church was rebuilt by Wren and completed in 1634. The advowson of the rectory was formerly in the possession of the abbot and convent of Westminster, but was bestowed by Queen Mary on the See of London.

There were originally three entrances to the church and a gallery along the south and west ends; but the west gallery has been partly removed, the remainder forming an organ gallery, while the south gallery has been done away with, leaving the oak screen and doorways intact. The side doorways in it form the present approaches to the church, which is almost a square in plan. Four columns on high bases in the centre of the church, with corresponding pilasters against the side walls, divide the church into nine square compartments. A cruciform figure is formed by the two segmental plaster vaults which intersect in the centre of the church, rising from the entablatures enclosing the angle bays. The four angle spaces are covered by flat ceilings. The effect of the old brass chandelier which has been hung in the centre of the church within recent years is very successful, and affords an interesting example of the decorative value of suitable fittings, which do more to make or mar the appearance of a building than is often realised. The woodwork of the church is good, and, though it has been partially reconstructed and altered, nothing has been done which destroys the internal effect of a very pleasing design. The three doorcases at the entrance screen, and that of the door leading to the vestry, the pulpit, and altar are all good examples of the work of the period. The well-designed marble font dates from 1673, and was presented by Thomas Morley.

The rectory of St. Mary Magdalen, Old Fish-street, which was situated on the north side of Knightrider-street, in the south-west angle of Old Change, was united with that of St. Martin when the church, which was seriously damaged by fire in 1886, was pulled down. A brass memorial plate of the date of 1586, on which is the figure of an old man in a gown, which is supposed to represent Thomas Berry, a fishmonger, who left a messuage in Southwark to the poor of the parish, has been fixed to the north wall of St. Martin, and with some panelling which was reused in the vestry of St. Martin was rescued from St. Mary Magdalen. The church, as rebuilt by Wren, was a small and simple building, with aisles and with a low steeple. The parish of St. Mary Magdalen was, after the Great Fire united to that of St. Gregory by St. Paul, which, with the church of St. Faith, may be said to have been practically incorporated in the old cathedral, which was described by Fuller as follows:—"Truly the mother church having one babe in her body (St. Faith) and another in her arms (St. Gregory)." Wren seems to have exercised most skill in internal design when dealing with square sites and domed spaces, and was far less successful when dealing with the more conventional problem of the aisled church, which, excepting when the outline of the church, as in St. Clement Danes, demanded an exceptional treatment, are somewhat disappointing.

COMPETITION NEWS.

☞ *It must be understood that the following paragraph is printed as news, and not as an advertisement; and that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.*

Alterations and Extensions to Harris Academy, Dundee.

The Dundee School Board, at its meeting last week, considered the report of Mr. Alexander N. Paterson, of Glasgow, the assessor appointed to adjudicate on the designs submitted in connection with the competition for the proposed alterations and extension of the Harris Academy. Mr. Paterson gave his award as follows:—1, Mr. W. B. D. Keith, architect and valuator, 10, Whitehall-street, Dundee; 2 and 3, Messrs. M'Laren, Sons, & Soutar, architects, 10, Reform-street, Dundee; 4, Mr. James Findlay, architect, 33, Albert-square, Dundee. The Board accordingly agreed to pay Messrs. M'Laren the premium of fifty guineas and Mr. Findlay the premium of thirty guineas. The author's estimate of £20,050 has been confirmed by his surveyor as accurate at pre-war rates. To cover present charges this estimate would have to be increased by 27½ per cent.

BOOKS RECEIVED.

Engineering Geology (second edition). By Heinrich Ries and Thos. L. Watson. (London: Chapman & Hall, Ltd. 17s. net. New York: Jno. Wiley & Sons.)

The Welsh Housing Year-Book, 1916. (Cardiff: South Wales Garden Cities and Town Planning Association. 1s. net.)

Lektrik Lighting Connections (fourth edition). Published by A. P. Lundberg & Sons, 477-489, Liverpool-road, N. 6d. net.

Civil Engineers' Cost-Book. By T. E. Coleman. (London: E. & F. N. Spon, Ltd. 6s. net.)

Tacheometer Surveying. By M. E. Yorke Eliot. (London: E. &. F. N. Spon, Ltd. 5s. net.)

Spon's Architects' and Builders' Pocket Price-Book. (London: E. & F. N. Spon, Ltd. 2s. 6d. net.)

THE HOUSING PROBLEM AT GREENOCK.

To assist in relieving the housing difficulty Greenock Corporation have agreed to procee with another extensive scheme. Ground ha been secured in the east end, and at a specia meeting it was decided to accept the tende of the West of Scotland Building Company fo the erection of a large number of houses o the cottage type. Financial assistance is bein given by the Government. A similar unde taking is at present being carried out in th centre of the town, and at the Battery Park th Admiralty are erecting huts for workme engaged in war service.

GENERAL NEWS.

Professional Announcement.

Messrs. Honeyman & Keppie, 257, West George-street, Glasgow, intimate that they have assumed Mr. Andrew Graham Henderson, A.R.I.B.A., as a partner, and that in future business of the firm will be carried on under the name of John Keppie & Henderson.

Consulting Surveyors for Army Purposes.

We hear that Mr. H. M. Cobb and Mr. Edwin Savill, members of the Council of the Surveyors' Institution, have recently been appointed by the Army Council Consulting Surveyors to the Eastern Command.

New Wharf, Dundee.

The new wharf at Dundee Harbour, which has cost £100,000, is now ready for use, but, owing to the existent circumstances, no formal ceremony will mark its opening. It will be known as King George's Wharf.

Institution of Civil Engineers.

At a meeting of this Institution, held on the 11th inst., the following elections of Associate members and admissions of students were reported:—Elected Associate members, thirty-two; admitted as students, three.

A D.S.O. for a Bridlington Surveyor.

In the list of awards of the Distinguished Service Order appears the name of Major Cecil G. Bradley, of the King's Own (Yorkshire Light Infantry). Major Bradley was for five years Surveyor to the Goole District Council. Just prior to the outbreak of war he resigned his position to take up a similar appointment at Bridlington. While at Goole he was in command of the local company of Territorials.

St. Paul's Bridge.

The Corporation of London has obtained Parliamentary sanction for extending the time allowed under the original Act for the compulsory purchase of the properties needed in connection with the construction of St. Paul's Bridge. The negotiations in connection with the proposed new bridge have been suspended, and the City is re-letting on tenancies terminable at short notice many of the properties already acquired.

"Lektrik Lighting Connections."

We have received from Messrs. A. P. Lundberg & Sons, electrical engineers, 477 to 489, Liverpool-road, N., a copy of their new (fourth) edition of "Lektrik Lighting Connections." This edition contains a new section on "Automobile Controls," and various corrections and additions have been made elsewhere. It is a valuable little booklet for everyone who has anything at all to do with electric lighting. The published price is 6d. net.

Building Work and the War.

Mr. James Brown gave an interesting address to the Manchester Society of Architects recently on the relations between the building owner, the architect, and the builder. The present system of carrying out work under contract, he said, was perhaps as near perfection as could reasonably be expected, but from the builder's point of view it was capable of improvement in some of its details, and in view of the building slump during the war this appeared to be the time for overhauling and revising conditions.

The Institute of Industry.

At the recent luncheon which the Court of Directors of the Institute of Industry gave to the Right Hon. Sir Edward Carson, K.C., M.P., the following resolution was carried unanimously:—"That this meeting of manufacturers and other representative men closely connected with all phases of industrial activity in the British Empire fully endorses and approves of the objects and policy of the Institute of Industry (of Great Britain and Ireland), Ltd., and recommends all persons or companies interested in the industrial life of the British Empire to support the Institute by becoming members."

Deceased Architect's Estate.

Lieutenant Samuel Hall, Manchester Regiment, of Cleveleys Hydro., Cleveleys, Blackpool, architect, was killed in Gallipoli on June 4, leaving £22,700.

"Willing's Press Guide."

Messrs. James Willing, Ltd., 125, Strand, W.C., have published the forty-third issue of "Willing's Press Guide," which, following the precedent of former years, has been carefully revised, and supports its reputation as one of the handiest and readiest of reference works of its class. The published price is 1s.

The Surveyors' Institution.

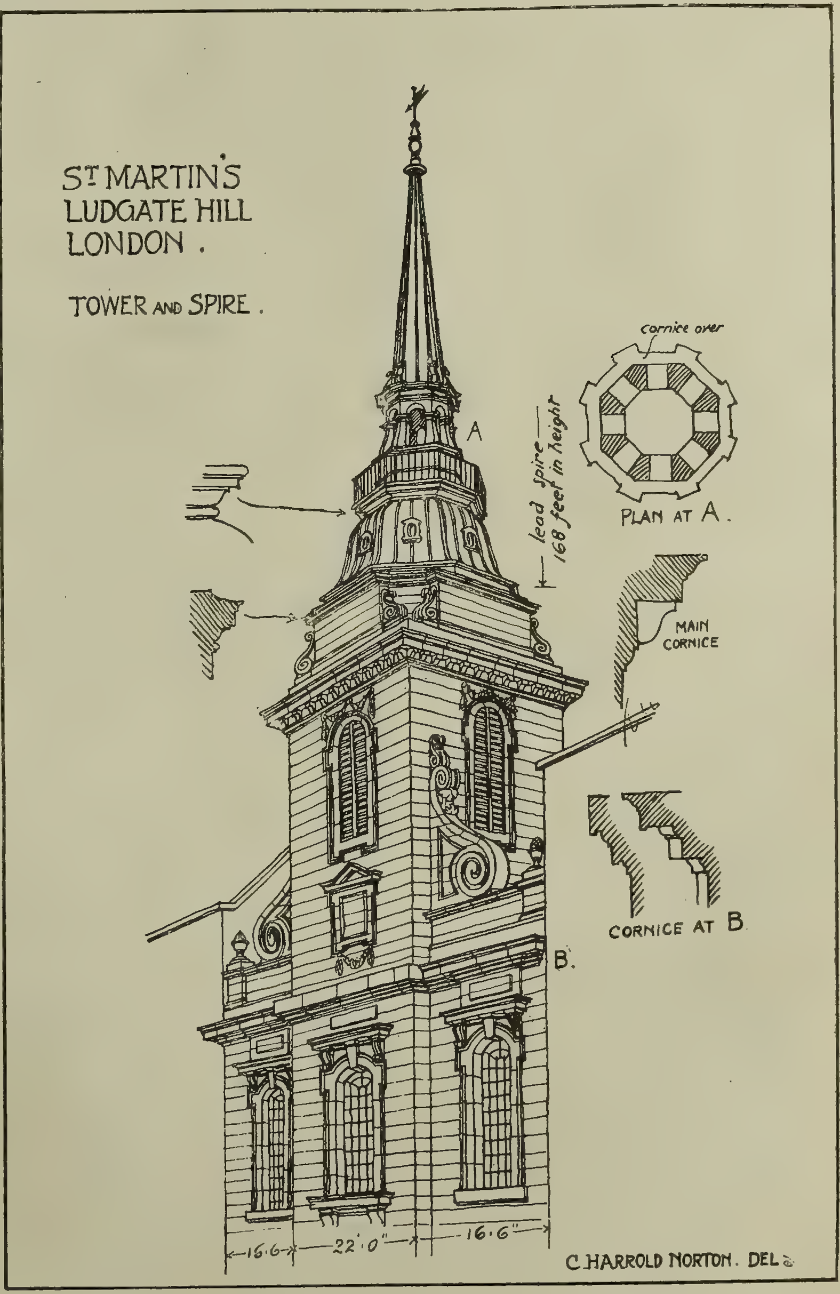
The next ordinary general meeting of this Institution will be held on Monday, February 7, when a paper entitled "Dilapidations—Some Notes and Suggestions" will be read by Mr. C. F. Slater. The Council, in the interests of the attendance, to meet the unusual present difficulties of war conditions, and to secure that full justice should be done to the papers read before the Institution, have decided to change the hour of meeting from 8 p.m. to 5 p.m., and also to reduce the number of meetings to one a month instead of one a fortnight. The remaining ordinary general meetings of the session will therefore be held on February 7, March 6, April 10, and May 8, the meetings on January 24, February 21, and March 20 being abandoned.

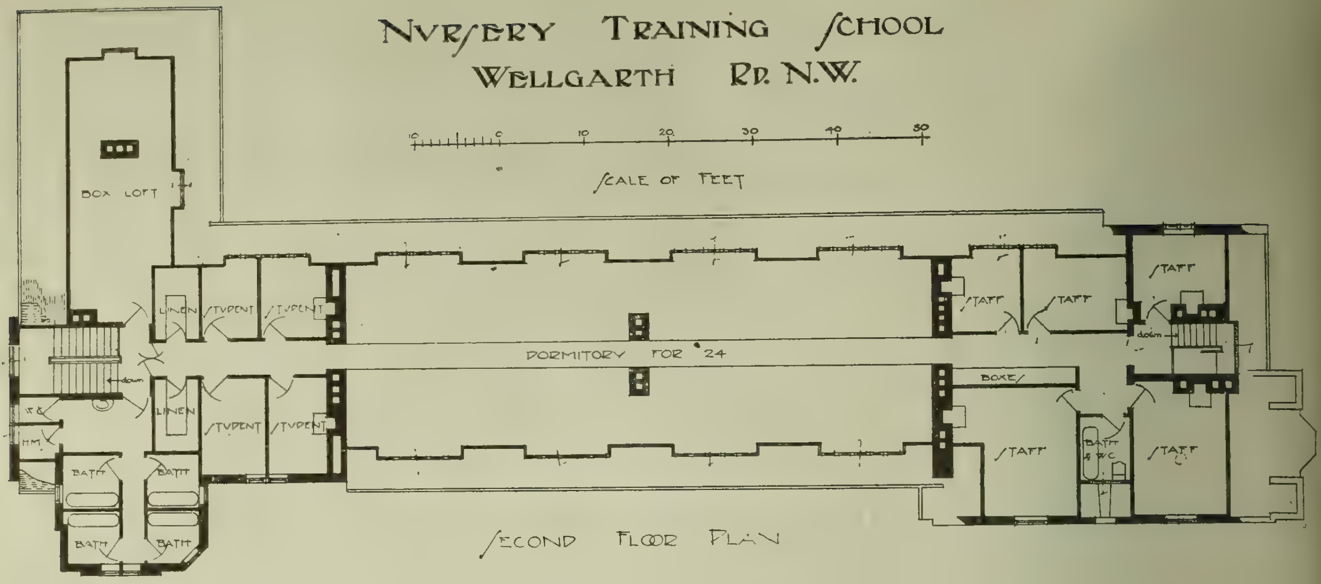
Acoustics at the Old Bailey.

The acoustic properties of the judge's court at the Old Bailey formed the subject of complaint by counsel a few days ago. Mr. Hume Williams, K.C., remarked that he had difficulty in hearing a witness's answers, and said that while addressing the jury the other day he had had the remarkable experience of having his own words hurled back at him. Mr. Justice Darling: "One hears rather well on the bench, but I have heard that counsel experience great difficulty in hearing. I have been told that in a case in which a judge pronounced a sentence of seven years' penal servitude the prisoner was paralysed by hearing a voice from the roof giving him another sentence."

The Building Trade in the Midlands.

The annual meeting of the Midland Centre of the National Federation of Building Trades Employers of Great Britain and Ireland was held in Birmingham on the 12th inst. In the annual Report it was stated that, speaking generally, the condition of the building trade in the Midland Centre during the past twelve months had been very unsatisfactory. It was true that in two or three towns—notably Birmingham, Coventry, and Wolverhampton—the erection or extension of factories required for war work had involved a certain degree of activity, but the demand on the part of private individuals and public bodies for building operations had been insignificant.





Messrs. Lovegrove & Papworth, Architects. (*See page* 67.)

ILLUSTRATIONS.

Restoration of a Portion of the Parthenon Frieze.

THIS work was carried out by Messrs. H. H. Martyn & Co. at the Cardiff Empire Theatre, and is referred to in our Correspondence columns. The "restoration" is a remarkably fine one, and does great credit to Messrs. Martyn.

In reference to these conjectural restorations of the Panathenaic Procession a few facts concerning the acquisition by Great Britain of the Elgin Marbles, with other fragments from the Parthenon and adjacent buildings, may be of interest.

It is now a hundred years ago that public opinion began to favour the purchase of the antiquities known as the Elgin Marbles. Previously, the enterprise of Lord Elgin had been condemned, and it was only after great efforts on the part of a number of enlightened people that £35,000 was voted by Parliament to secure the works now considered to be priceless. The romance of these sculptures forms a fascinating chapter, not only in the history of art, but of international relations. Napoleon and Nelson come into the story, with many other celebrities of a century ago, and no antiquities in the world have more interesting associations.

An architect was responsible primarily for the national inheritance of the Elgin Marbles. His name was Thomas Harrison, and he was employed in 1796 by the Earl of Elgin in connection with a mansion in Fifeshire. Harrison was interested in archæology, and when, in 1799, the Earl of Elgin was appointed to the Embassy of the Ottoman Porte, Constantinople, he suggested to the new ambassador that some of his time might be employed in making the beauties of Athenian architecture and sculpture better known to students. Lord Elgin liked the idea, became enthusiastic when he thought more about it, and eventually planned to preserve records of Greek art within the Turkish dominions.

Lord Elgin gave special attention to the Parthenon, and tried to interest the British Government in the subject. His idea was to obtain casts of the sculpture and drawings of the whole building, so that before the structure suffered demolition, as seemed probable, a complete record should be available in after-years. The Government, however, had other weighty matters to occupy their attention, and their reply was "entirely negative." So Lord Elgin embarked on a scheme of his own, seeking first of all the co-operation of J. M. W. Turner, R.A., and, when that genius proved inaccessible, turning to another artist for assistance. He arranged with Tita Lusieri (a Neapolitan portrait painter), two architects, two modellers, and a figure painter to proceed to Athens. The work of these artists was restricted at first by the authorities, but opposition was removed gradually, scaffolding was placed round the Parthenon, and every facility was granted to the party. As a matter of fact, the Turks cared nothing for the building as an antiquity, and had even pounded down some of the statues to make mortar; but there were political reasons why they did not favour the Elgin enterprise from the beginning.

It had not been Lord Elgin's intention to remove the sculptures, but to obtain plaster casts and measured drawings. But he was so distressed by the indifference of the Turks that he determined to secure the actual Marbles before they were destroyed in ignorance. After negotiations, in which bribery necessarily played a part, concessions were made and several hundreds of workmen were engaged to remove the sculptures from the building. Between 1803 and 1812, when Lusieri left the scene, large numbers of cases containing the precious antiquities were despatched, and some of them did not reach England without adventure. For instance, the *Mentor*, conveying a part of Lord Elgin's cargo, was wrecked near Cerigo, and divers worked for three years to recover the Marbles.

Lord Elgin hoped that when the British Government heard of his success in securing the beautiful relics of the past they would take over the various objects at a price sufficient to cover the heavier expenses. That was all he asked. But his surprise was intense when his offer was not only rejected but his actions were described as vandalism. One connoisseur, who carried great weight, declared that the works could not be attributed to Phidias, as that master had never worked in marble at all; and he believed that the sculptures which decorated the pediments of the Parthenon were executed in the time of Hadrian. Other influential people concurred, and the whole enterprise seemed likely to end in a fiasco. The vicissitudes of fortune which had afflicted the figures through many centuries still continued. Instead of passing direct from Athens to the British Museum, as had been anticipated, they were left in the possession of Lord Elgin, who was at his wits' end to know what to do with them. He would have presented the fruits of his labours to the nation but for the fact that his outlay had been so considerable. He rejected the idea of parting with the treasures to any other country but his own, though his patriotism was sorely tried. His private house in Park-lane had been turned into a museum, but the works still failed to command respect. They were shown at Burlington House ("Athens transplanted to Piccadilly") until the spring of 1815, when, the building having been sold, Lord George Cavendish requested that the Marbles should be removed. The Trustees of the British Museum were asked to take them on deposit, but refused, and the outlook was not encouraging.

The dawn of appreciation came at last, largely through the unconquerable spirit of the ill-fated historical painter, B. R. Haydon. He saw the value of the works and understood their true artistic importance. Other artists joined him in his agitation, and at last a Select Committee of the House of Commons was appointed. They sat from February 29 to March 13, 1816, and tried to sift the evidence. Those who spoke in favour of the treasures included Sir Thomas Lawrence, Nollekens, Flaxman, Westmacott, Chantrey, and William Wilkins, afterwards architect of the National Gallery, who, though he doubted the Phidias tradition, felt bound to admit that the objects were valuable as examples of architectural sculpture. Charles Rossi wrote to Canova and said if he had not seen the Elgin Marbles he had seen nothing. So Canova came to England and added the weight of his appreciation to the project.

It was considered doubtful, however, whether the purchase of the works would be recommended, and still more so when it was intimated that the most powerful advocate of all, B. R. Haydon, would not be examined, "out of delicacy to Mr. Payne Knight" (the oracle of art at that time, who was against the purchase). An international competition seemed to be pending. The King of Bavaria told his agents in London to draw £30,000 as an immediate advance to Lord Elgin, and other European sovereigns were also on the alert for a bargain. But, after all, the Marbles were secured for England. In June, 1816, Parliament rather sulkily voted £35,000 to Lord Elgin, and the sculptures associated with his name were duly removed to the British Museum. His own expenditure, with an allowance for interest, amounted to some £74,000.

It is instructive to reflect on the change in opinion which has taken place in a hundred years. Then only a few realised the value of the imported treasures; now they are regarded with the greatest veneration and are the standard works for study. Watts, the great painter, regarded them as his chief teachers, and scarcely an architect, sculptor, or painter has not learnt something from them since they became available to students in this country.

St. Martin, Ludgate-Hill.

WE reproduce this plate from "The Churches of Sir Christopher Wren," by J. Clayton, which was published by Messrs. Longmans, Green, Brown, & Longman in 1848, and which we give by the courtesy of Messrs. Longmans, Green, & Co. The gallery over the west and south sides has been done away with in recent years, the side entrances blocked up, and the centre entrance remodelled, but our illustration represents the church at an earlier date.

No. 19, Weymouth-Street, W.

THE contractors for this house were Messrs. James Smith & Sons (Norwood), Ltd., of 106, New Bond-street, W.; the wrought-iron work was executed by Messrs. H. & C. Davis & Co., of Clapham; the lift was supplied by the Titan Lift Company; the fibrous-plaster work was carried out by the Modellers and Plastic Decoration Company; and the door furniture by Messrs. C. Harvey & Co.

Nursery Training School, Golder's Green.

THIS building was opened by her Grace the Duchess of Marlborough on December 10, 1915, and has been erected by Messrs. John Greenwood, Ltd., from the designs of Messrs. Lovegrove & Papworth, for the Women's Industrial Council. The building is designed to carry on the work commenced a few years ago in King Edward-road, Hackney, of training girls of the middle classes in the care of young children. The girls live in the school for a year, and are taught elementary nursing, housewifery, and child training, after which they are qualified to accept positions in private families, the demand being far greater than the supply. The children also live in the school, coming from homes where their proper attention is impossible, or from which their absence is advised on medical grounds. The building contains bedrooms and dormitories for the students on the second floor and nurseries on the first floor. Each nursery contains only a small window to the north, but to the south or garden front the whole of the side is enclosed by collapsible partitions leading on to a wide verandah, which can also be enclosed by collapsible partitions, the whole of which have been supplied by the Educational Supply Association.

Externally the building is faced with mixed Amersham bricks, and the roof is covered with hand-made Hartshill brindled plain tiles; internally the walls have been left for the present plain, distempered with jointless cork adamant flooring by Messrs. E. J. Moon. The whole of the joinery is stained with solignum and wax polished.

The staircases are so arranged that access in case of fire is assured to either one or other of the stairs from all upper rooms, irrespective of where the fire breaks out.

The ground floor contains the warden's office, matron's room, student's common room and dining-room, kitchen, scullery, and cloakrooms, all the principal rooms opening on to the arcaded verandah to the south, the north front containing the connecting corridor. In the basement are the laundry drying-room and heating chamber.

The steel construction is by the Aston Construction Company, Ltd., electrical engineering by Messrs. Speedy Eynon; and hot-water installation by Messrs. Potterton & Co. All windows are arranged for cleaning from the inside, the steel sashes and leaded glazing being by the Crittall Manufacturing Company.

Memorial Altar, etc., Wiveliscombe Parish Church.

AT the parish church, Wiveliscombe, Somerset, a new altar, reredos, and east window have been erected in memory of the late Lieut. R. E. Hancock, D.S.O., who was killed in action at Festubert on October 29 last, aged twenty-six. The reredos is of carved oak, and is designed to contain a large central panel with a painting of the Crucifixion, by Miss Mabel Esplin. Mr. F. Bligh Bond, F.R.I.B.A., of Glastonbury, is the architect for the work; and Messrs. R. L. Boullon & Sons, of Cheltenham, are the contractors.

The window (a rose-window) will be filled with glass containing a figure of St. Michael, designed by the architect, and executed by Miss A. M. Erskine, of Stamford.

West Park Presbyterian Church, New York.

THIS church, which is a fine example of Messrs. Carrère & Hastings' work, is the more interesting to us as such buildings in this country, being, as they are, church and institute in combination, are, as treated here, too frequently lacking in dignity and architectural character. Our reproductions are from the *Brickbuilder*, by whose courtesy we republish them.

FIFTY YEARS AGO.

The Liverpool Opera House.

MADEMOISELLE TITIENS has laid the chief stone of the Alexandra Theatre and Opera House on a site in Lime-street, between London-road and the railway-station, where there are three street frontages, the principal one to Lime-street. Mr. A. Salomons, of Manchester, is the architect, and Messrs. Jones & Son are the contractors. The building is to be completed by October 1 next. The report of the directors of the company who are erecting the building states that 3,830 shares have been subscribed for and £4 a share called up. The site cost £15,750. The main walls of the building have been raised 18 in. above the ground, at a cost of £1,457. The estimated cost of the whole is £15,000, for which, says the Report, "the whole of the most modern improvements (including a covered entrance drive) will be carried out, and 1,500 persons will be seated in a theatre second to none in Europe, in comfort, convenience, and good taste. The shops and restaurant included in the proposed building are estimated, by competent authorities, to produce a rental of £600 a year."

[*⁎* We give the above extract from the *Builder* of January 20, 1866.—ED.]

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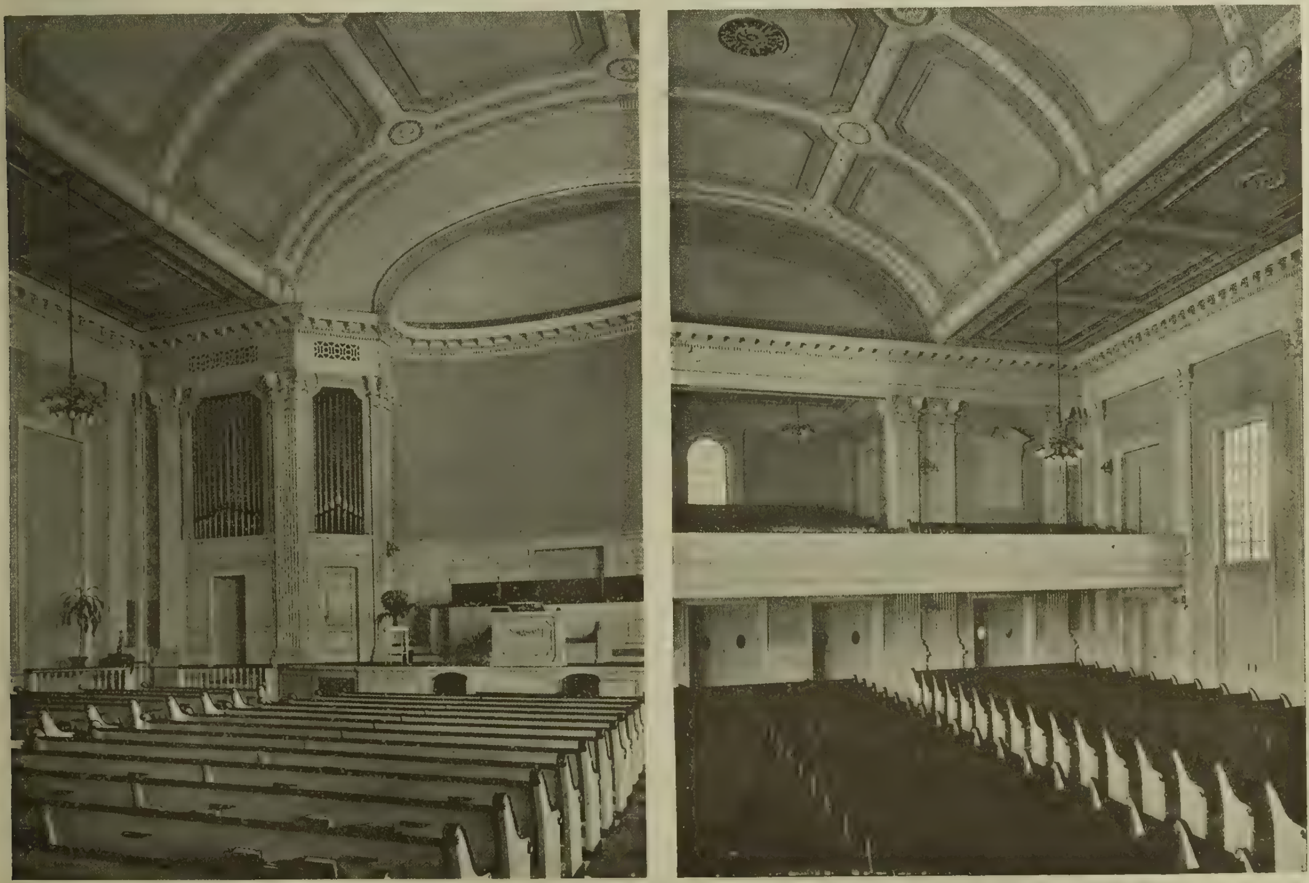
SAVING ON PUBLIC WORK.

The London County Council are suggesting to the City Corporation and the borough councils of London that, with a view to effecting economies during the war, arrangements might be made where similar duties are performed by some or all the authorities for their transfer to one authority only for the time being, and, if necessary, for a temporary amalgamation of staffs with that object.



Interior View looking towards Chancel. Interior View looking towards Galler

West Park Presbyterian Church, West 174th-Street, New York, N.Y.

Messrs. Carrère & Hastings, Architects.

(From the *Brickbuilder*, Boston, Mass.)

Leading Contents.

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MEETINGS.

Friday, January 21.

Institution of Mechanical Engineers (*at the Institution of Civil Engineers, Great George-street, Westminster*).—General meeting. 6 p.m.

Monday, January 24.

University Extension Lecture (*at the Victoria and Albert Museum*).—Mr. Banister Fletcher on "Belgian and Dutch Renaissance and Modern Architecture." 4.30 p.m.

Thursday, January 27.

University Extension Lecture (*at the British Museum*).—Mr. Banister Fletcher on "The Pantheon." 4.30 p.m.

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PROPOSED HISTORICAL PAGEANT.

The City Corporation are being asked for the use of the Guildhall on a day in March next for the holding of a great historical pageant in aid of the Young Men's Christian Association's scheme for the provision and maintenance of soldiers' huts.

CORRESPONDENCE.

Conjectural Restoration of the Parthenon Frieze.

We have received the following correspondence in reference to Mr. A. C. Conrade's conjectural restoration of the Parthenon Frieze, an illustration of which appeared in our New Year's issue:—

Sir,—In your journal of the 7th inst. there is illustrated a "Portion of the Parthenon Frieze, being a conjectural restoration by A. C. Conrade."

We should like to make our position perfectly clear on this matter, as we have no doubt you will understand our astonishment at the publication after we have explained the facts. Enclosed we have pleasure in sending you photographs of the "Restoration of the Parthenon Frieze," which we have recently designed and executed at the Cardiff Empire Theatre. We were requested by the architect to send to Mr. Conrade copies of these photographs on September 13, 1915. This frieze was then completely modelled and designed for the Cardiff Empire Theatre without relation to any suggestions from Mr. Conrade, and, in fact, without his knowledge until that date.

We feel sure that it will be apparent to you that the sketches illustrated are, in principle, almost replicas of the photographs which we supplied to Mr. Conrade, with the exception of the lower panel. We would more especially point to the two central panels illustrated, which have apparently been very closely worked to from a technique point of view.

We would, therefore, ask you to kindly give the fullest publicity to this fact, and also to publish the photographs with our name attached in your next issue.

H. H. Martyn & Co., Ltd.,
Sculptors and Architectural Decorators.
Cheltenham.

We communicated with Mr. Conrade, and the following is his reply:—

Sir,—I am truly sorry if I have in any way annoyed Messrs. Martyn. If so, it was quite unintentional on my part. I have had a student's ticket for the Græco-Roman Department of the British Museum for years; have shown and "restored" nearly everything there; and it is hardly likely that the frieze would have escaped me. My drawings are based upon the frieze itself (as the photographs of the latter will show), and also upon John Henning's restoration (1829-30).

Messrs. Martyn will pardon my saying so, but I have at least as much right to restore a dilapidated frieze as they have. In two restorations of the same thing there must be at least some resemblance. And I think everyone will admit that a further examination of their frieze and mine will show differences throughout.

In any case, should I have unwittingly offended Messrs. Martyn, I hope that they will accept my acknowledgments and apology.

I shall be pleased to answer any further inquiries. Alfred Charles Conrade.

P.S.—In reference to the Cardiff Empire Theatre, for which Messrs. Martyn's frieze was executed, I may say that I painted the act drop for this, and did nothing more.

I introduced part of the frieze into this in June, 1915, illustrated in the *Builder*, October 8, 1915 (some time before the date, September 13, 1915, on which Messrs. Martyn say they wrote me, as was the case). The sketches you had were completed before then by some time.

The Committee of the Moss Empires approved my sketch, as can be seen in the letter from the architects (Messrs. Milburn, of Sunderland) of June 25, 1915, to me, confirming the order. I wrote Messrs. Martyn, offering to model the frieze, but they replied, under date July 22, 1915, that that matter was settled. Still, I offer Messrs. Martyn complete and unconditional apology and regret for any wrong I may have done them, or for anything for which I am indebted to their frieze. A. C. C.

[*** We give, in one of our inset plates this week, the illustrations referred to in Messrs. Martyn's letter. We may add that in publishing in this issue Messrs. Martyn's admirable restoration of a portion of the Parthenon Frieze executed by them at the Cardiff Empire we are giving the most emphatic and convincing testimony to the statements made in their letter. We may remark that we published Mr. Conrade's drawings in good faith, without knowing that he had the data which it now appears clear he had to draw upon.—Ed.]

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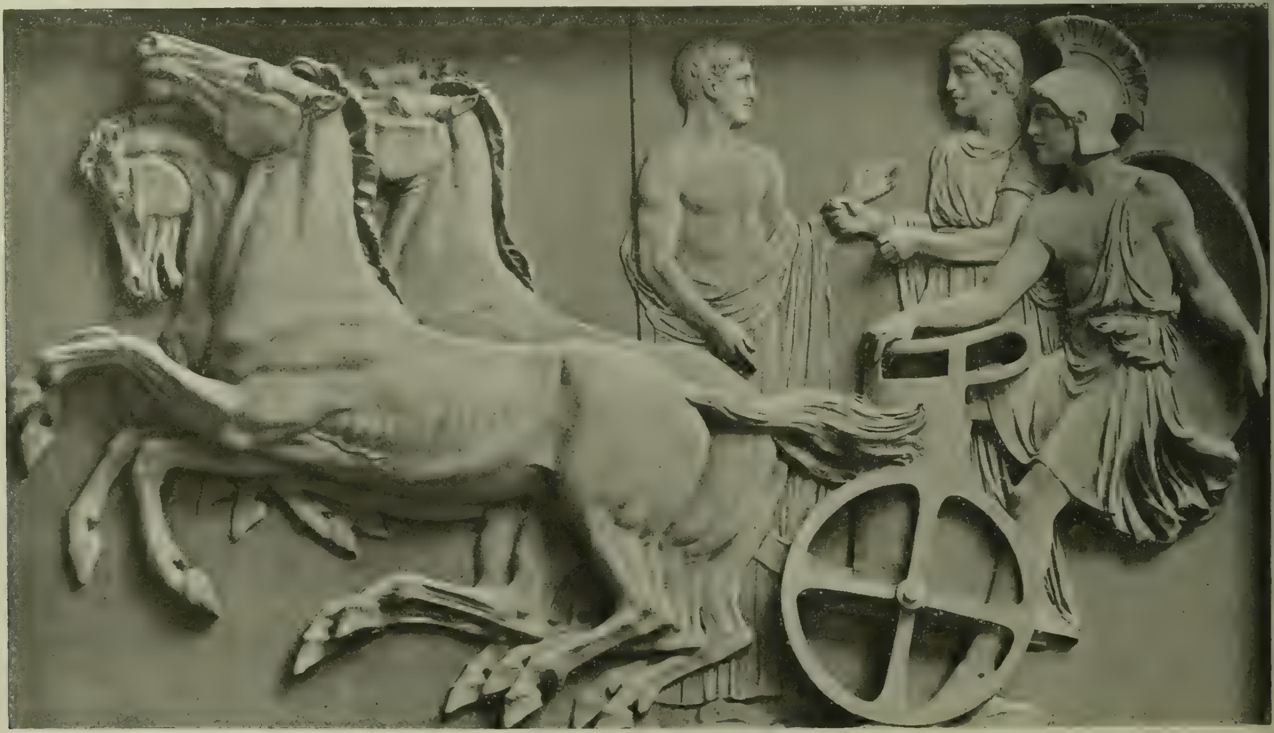
POPULARISING STONEHENGE.

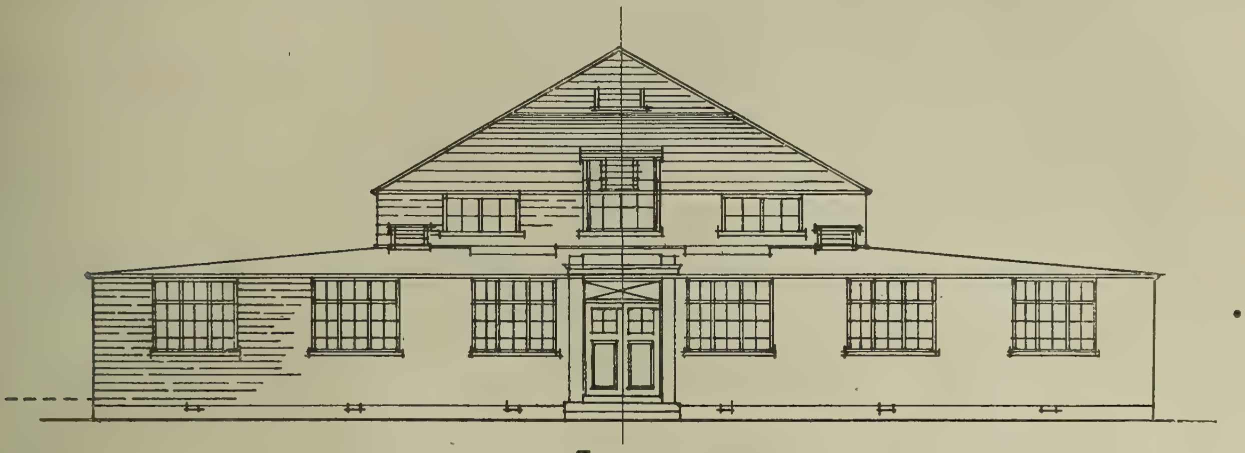
Mr. C. H. E. Chubb, of Bemerton Lodge, Salisbury, upon formally taking possession of Stonehenge, has reduced to one-quarter the charge of admission to men in uniform.



Part of Conjectural Restoration of the Parthenon Frieze.

Designed for and executed at the Cardiff Empire Theatre by Messrs. H. H. Martyn & Co.

CONSTRUCTION SECTION.



SIDE ELEVATION.

Fig. 1.

TEMPORARY BUILDINGS FOR WAR PURPOSES.

By T. P. Bennett, A.R.I.B.A.

VARIOUS war purposes have rendered necessary the rapid erection of extensive temporary buildings, and the need for meeting this demand has called into existence many new problems for the architect and the builder.

It is probable that twelve months ago few experienced men had realised the enormous difference between building conditions in the heart of towns and those prevailing upon the sites frequently selected for large army camps and munition factories, and the full extent of the difference was only appreciated after the erection of large numbers of buildings in these isolated districts.

For various very practical reasons, most of the sites selected for such structures are several miles from any large towns, and are a considerable distance from the nearest railway-station.

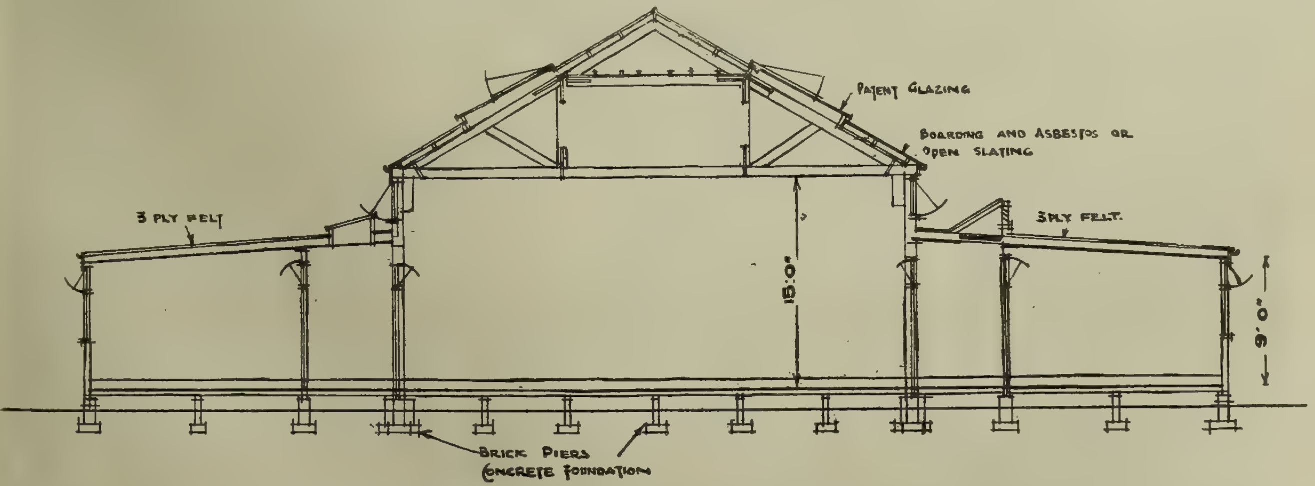
The first problem that presents itself for solution, therefore, is not one of planning or construction, but of transport. The primary consideration is speed, and this factor must often over-rule all others in importance. Experience has proved that organisation will play a leading part, both in economy and in rapidity of erection. Organisation and transport are closely allied, and are therefore the two factors which will first receive consideration.

Many points will be found to affect the decision that is to be made as to the best means of delivering men and material, but for practical purposes they may be summarised under the following heads:—

1. The distance of the site from the nearest railway.
2. The nature of the intervening ground.
3. The size of the building programme.
4. The nature of the roads.

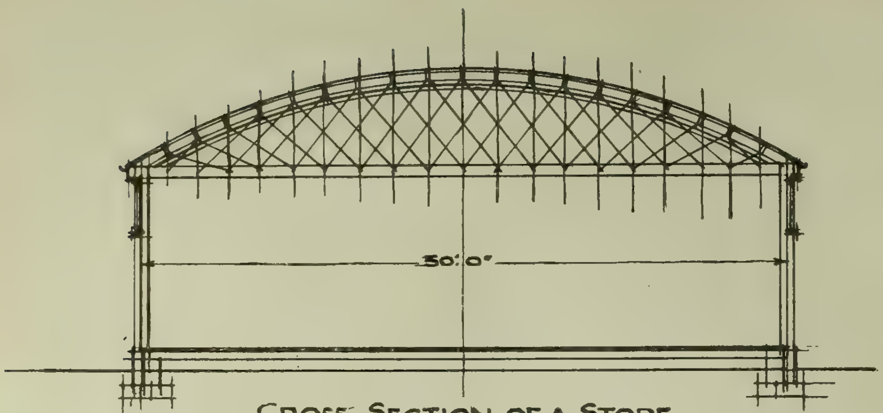
1. In dealing with large schemes a railway should *primâ facie* be considered a necessity. If the building is less than 2 miles from the nearest siding, and the intervening ground is fairly level, no hesitation need be felt in incurring the capital expenditure which will be involved. When complete, the railway needs far less attention than road transport, and is very much cheaper; but apart altogether from these considerations are other factors which sometimes present insuperable obstacles to road haulage and render a railway a necessity. The first is the increasing difficulty that is experienced in obtaining steam wagons or motor lorries. Broadly speaking, they are unobtainable upon a large scale in districts far removed from ordinary trade centres. If road transport is employed it is furthermore necessary to keep to main roads, of which more will be written later. When the site is more than 2 miles from the main line connection, a railway may still be the most economical means of dealing with haulage; but the increasing initial cost becomes an item for serious consideration.

2. Great distance, coupled with hilly country, may be a strong argument in favour of road traction if the road surfaces are good. Gradients of more than 1 in 20 render a railway expensive and difficult to work, and often cause serious damage to locomotives, besides getting rapidly into bad condition in wet weather. Steeper gradients are not impossible, especially if they are short, and a 13-in. cylinder locomotive will carry about six or seven trucks up an incline of 1 in 11·5 if each truck is loaded with not more than from 3 to 5 tons of material.



CROSS SECTION OF AN OFFICE BUILDING.

Fig. 2.



CROSS SECTION OF A STORE

SHEWING A BELFAST ROOF.

Fig. 3.

It follows that, if a railway is to be constructed with a maximum gradient of 1 in 20, hills will necessitate a large amount of excavation. Excavation is costly and slow, and labour of any kind, especially navvy labour, is now exceeding scarce.

3. Apart from initial cost, rail haulage is considerably cheaper than road haulage, and if the total quantity of material is sufficiently large the railway will pay for itself many times over. The cost of the construction of a railway at the present moment, including material and labour, is about 30s. to £2 per yard run, allowing for a depth of about 1 ft. 6 in. of excavation. The cost of road haulage is about 1s. 3d. to 1s. 6d. per ton per mile, irrespective of the cost of road repairs. The cost of haulage upon a railway after it is completed is about 1s. per ton per mile, including shunting and delivery to sidings and spurs—one journey only to be measured in each case.

4. The nature of the roads is often the crux of the whole matter. Ordinary country roads built for light motor traffic are perfectly useless for steam wagons and heavy material. Frequently such roads have only a crust of 4 in. to 6 in. of macadam without any bottom, and break like thin ice under the weight of motor lorries loaded with building plant and material.

The condition to which a road can be reduced in a short time is inconceivable until it has been experienced; but after one or two cases of badly-smashed highways every effort is made to approach by rail, although large capital outlay may be involved.

The value of sleepers and rails as second-hand material is a point that should not be overlooked.

The next consideration in arranging the scheme is the level of the ground in various parts of the site. Speed demands that no time must be lost upon foundations, and unless a site is very flat a great amount of brickwork will be required for sleeper walls and concrete piers. The eye should not be trusted in such matters, and arrangements should be made to level the ground as soon as the position of the buildings is provisionally agreed. It is not uncommon to find, after pegging out, that the site for a building 200 ft. long falls 7 ft. in its length, although the maximum difference in level was judged to be about 2 ft.

After settling the site, some provision should be made for housing the men. Labour is scarce, many of the sites are very exposed, and if artizans and labourers arrive and find no provision made for them they can, and will, obtain work elsewhere. In most contracts special inducements are offered to the men over and above ordinary allowances. Such inducements take the form of free fires, cooking utensils, travelling allowances, etc. It will probably be necessary to advertise for labour, and some novel methods have been employed in this direction. One contractor utilised the screens of the picture palaces for miles around, and arranged for the display of a notice somewhat on these lines:—

ARTIZANS AND LABOURERS!
Come and help your country by building huts for housing the Army.

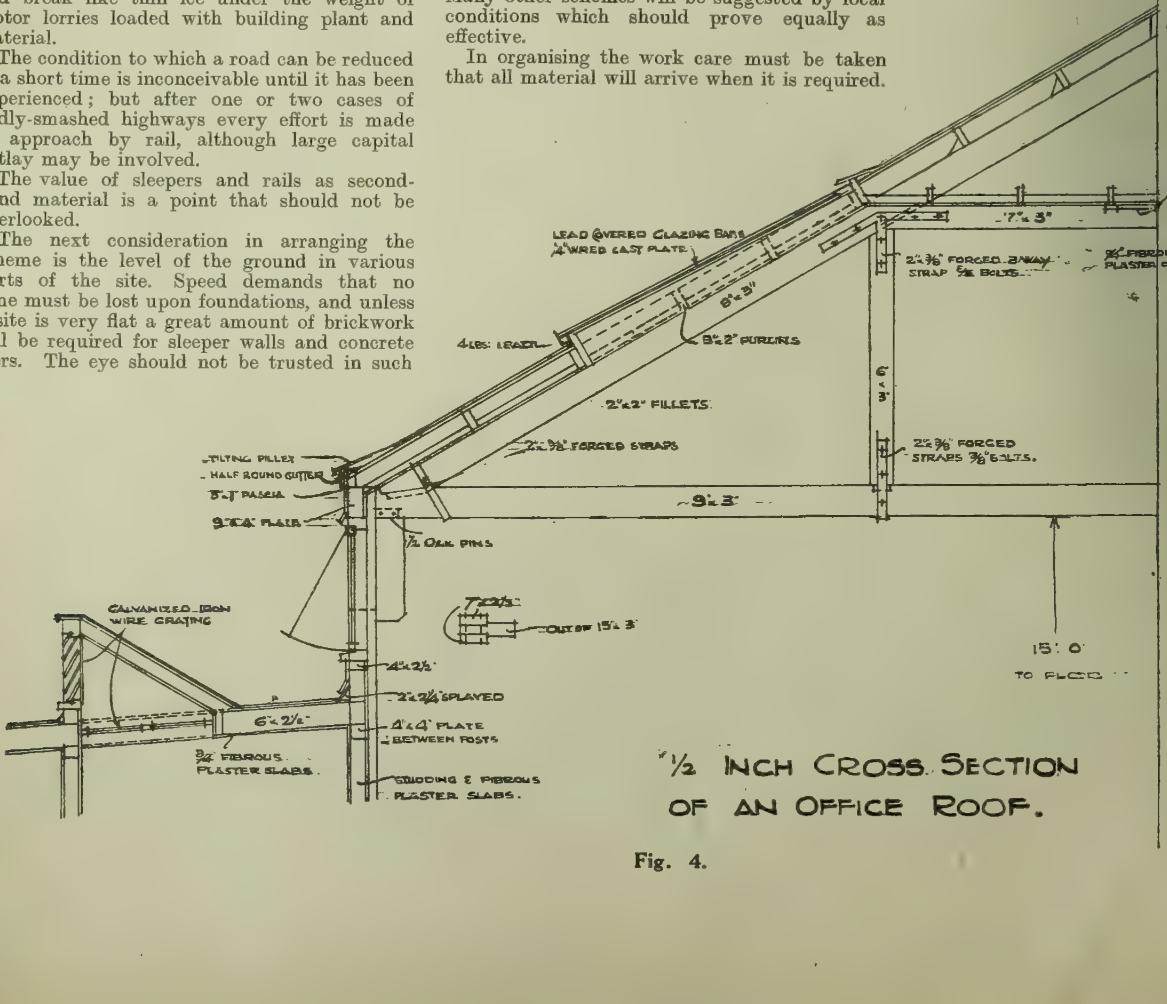
Many other schemes will be suggested by local conditions which should prove equally as effective.

In organising the work care must be taken that all material will arrive when it is required. Many contractors have not made due allowance for the shortage of supplies, for the congested state of the railways, and for the fact that ships are almost unobtainable. Contracts have been in consequence seriously delayed, and disorganisation has inevitably followed.

With regard to the type of building that is to be adopted, it should be borne in mind at the commencement of the work that all men who present themselves must be taken on and difficult setting out is therefore to be avoided.

Every building, and every portion of the building, must be plain and straightforward. As many repetitions as possible should be used, and types should not be varied unless there is special reason for doing so. This means that a minimum number of highly-skilled men is needed; the risk of mistakes is reduced to the greatest possible extent and economy is secured. Upon account of the lightness of construction, wind pressure assumes a position of greater importance than it ordinarily occupies, and it is therefore advisable to avoid high-pitched roofs and large spans. When, as is generally the case, timber construction is employed, large spans necessitate large scantlings, and baulk timber is both scarce and costly. The handling of beams upon the work also involves additional tackle and more men.

If large unobstructed areas are, however, desirable, the roof may be spanned either with a queen post or Belfast truss. A section of an office building, showing the former, is illustrated in Fig. 2. In this case, stiffness was attained by hipping the ends of the roof, as shown in elevation Fig. 1; and the employment of hips in such a manner is a justifiable expense. The individual members of the truss may be made much smaller than is customary on account of the lightness of the roofing material and the temporary nature of the building. The sizes given in Fig. 4 were used for a 35-ft. span. Lack of ventilation in top-lighted rooms is guarded against in the section shown in Fig. 2, additional light being also obtained by means of the clerestory windows. The low-pitched roofs over the corridor and side-rooms shown in this section consist of plain 6-in. by 2½-in. rafters, with 6-in. by 3-in.



½ INCH CROSS SECTION OF AN OFFICE ROOF.

Fig. 4.

rimmers to carry the roof lights. Small blocks re covered by a simple collar roof; wide span oofs over shell stores are frequently of the Belfast type, such as that shown in Fig. 3, which will be again referred to later.

The construction of the walls and roofs is a matter that has received much consideration, nd experience has proved that wood-framing overed with weather-boarding or corrugated-ron is, as a rule, the cheapest and most rapid method of erection.

Other types of buildings are, however, more uitable for some purposes, and are enumerated below.

1. Buildings constructed of concrete blocks. These have given good results, but they are ostly and cause delay. Before erection can e commenced a large number of machines must be brought to the site and a considerable amount of time and money must be spent upon foundations. Frosty weather prohibits progress altogether, and may destroy many f the blocks which are not thoroughly set. Further than this, a rough or uneven site will ause greater difficulty and expenditure than s the case with timber buildings. Upon the other hand, the building is more weather-proof, more equable in temperature, and will cost ess for maintenance.

2. The second method that may be con-idered is the employment of steel framing, xpanded metal lathing, and cement rendering. The chief difficulties that will be incurred are he delay and expense in obtaining delivery f the steel, the length of time occupied in xing, and the necessity for the employment f highly-skilled labour.

It is only in comparatively rare cases hat buildings of this type can be justified, ut a variation has been employed by dopting timber framing, steel lathing, and ement rendering. This method is successful o some extent and produces a building of a emi-permanent character. It is, however, mpossible to lay the cement in frosty weather, nd defects frequently appear from the hrinkage of the studding, which causes the laster to crack.

The cheapest and most usual type of building, s before stated, is constructed of wood studding overed with weather-boarding or corrugated-on sheeting, and roofed either with boarding nd felt open slates or asbestos tiles, or with cor-ugated-iron. Weather-boarding is cheaper than on and is more easily obtained. Upon the other and, iron makes a more weather-proof building, nd the cost of black iron is not very greatly excess of wood. Three-quarter-inch by -in. by 4-in. to 7-in. weather-boarding is ufficient for ordinary purposes; and $1\frac{1}{4}$-in. by -in. rebated for more important structures or uildings which must be reasonably draught-roof, such as hospitals. The sides of the uts should be formed of 4-in. by 2-in. or 4-in. $2\frac{1}{2}$-in. studs, 4-in. by 4-in. angle posts, in. by 3-in. plates, and 4-in. by 2-in. noggings. o timber larger than 4 in. in its smallest mensions should be used, as all sizes above is must be sawn from baulk, causing delay d expense. Posts carrying large span roofs ould be built up of smaller scantlings (see gs. 2, 3 and 4). Thus, an 8-in. by 7-in. post a 30-ft. to 40-ft. span would be built of 7-in. by $2\frac{1}{2}$-in. and 1 7-in. by 3-in., bolted gether with $\frac{5}{8}$-in. bolts 1 ft. 6 in. apart, placed zag.

The roofs should be covered with $\frac{3}{4}$-in. rough ards and patent roofing felt. The con-uction is light and the various members of e trusses can be made correspondingly small. mensions are given in Fig. 4 for a queen st truss for a 35-ft. span. Spans greater an this should be covered by a Belfast roof, shown in Fig. 3, which is a diagram rectly set out. The majority of these trusses own in books are incorrect, and many of them uld fail if an unexpected load were applied. e individual members of Belfast trusses small, and can frequently be obtained m the off-cuts of other timber. The mensions for a 40-ft. span are as follows:— beam or bottom boom, Fig. 4, 8-in. by $\frac{3}{4}$-in. in rib; Fig. 4, 2-in. by $1\frac{1}{2}$-in.; braces, 3 in. by n. or 3 in. by 1 in. The braces should run ough the main rib, and should be spiked to purlins, thus stiffening the truss and ucing the stress in the main rib.

The centre member of the posts supporting the trusses should be stopped short, and the tie beam should run through between the outside pieces, the whole being connected together by means of bolts. The bottom of the posts should be built into concrete or brick piers, and the plates well spiked to each side. These buildings are light, and high winds will lift off the roofs, or will raise the building bodily if the situation is exposed and they are not well secured.

The eaves of the roof should project well over the sides, and if economy is a primary consideration it is possible to dispense with eaves, gutters, and R.W.P.'s. The roofs should be felted with some well-known felt such as Anderson's, Engert & Rolfe's, McNeill's, Ruberoid, or the Willesden Waterproof Sheeting. Eaves gutters can be C.I. or made V-shape, and constructed of wood. The felt should be nailed over the edge of the boarding with galvanised-iron nails. Valley gutters can be laid in C.I. or lead, but, if the work is large enough to justify the carriage of asphalting plant and the employment of skilled men, asphalt gutters are more satisfactory. Felt gutters are never safe from the possibility of leakage, and most of them will not hold water if tested immediately after completion. If lead gutters or flashings are used, 4 lb. lead is sufficiently heavy for all purposes. It is cheaper to insert additional walls and piers and use small timber for the floors than it is to use large spans and correspondingly large binders or bridging joists.

If the foundations finish at ground level, concrete piers are cheapest and best, and the posts can be inserted in them after being coated with Solignum. Plates are carried on the top of the piers. If the floor of the building is far above ground, brick piers are preferable and cheaper. Those which carry the main posts should be constructed with a $4\frac{1}{2}$-in. skin and 9-in. by 9-in. clear inside. The post is inserted in the centre of the space formed and packed around with concrete.

The finish, decoration, and cost of these buildings cannot be touched upon in so short a space, and attention has been confined therefore to the broad lines of the commencement of the work and general arrangement of the structure. It will be seen that speed and economy are the two essential features, and most other considerations must be sacrificed for the attainment of these points. The question of economy is, however, very wide, and does not consist of the adoption of a cheese-paring policy. Almost it might be said that the opposite is the case, and that true saving is effected by a comparatively lavish expenditure in organisation and preliminary work. Such expenditure, however, must be directed by knowledge and experience, and the speed of erection renders these qualities of inestimable value. In an ordinary building a mistake can be rectified, and becomes an incident. In war building a mistake is immediately magnified into a serious blunder.

A comparatively large amount of consideration should therefore be given to preliminary points until an intimate knowledge of new conditions has been obtained. If this is done, architect, builder, and owner will be saved a large amount of that anxiety which is an invariable attendant upon very rapid operations.

SCHOOL, WOOLACOMBE, DEVON.

The new County Council school which has been provided for the children of this little seaside resort and its neighbourhood has recently been opened. The school, which is situate on the left-hand side of the road approaching the village from the railway-station, is a building of local stone, faced with waterproofed cement, with a rough-cast finish, and having a slated roof. The site, comprising $1\frac{1}{4}$ acres, is enclosed in an unclimbable iron fence. The school is divided into three classrooms, and is entered by a spacious corridor. The walls have been coloured with water paint, and the floors are of wood blocks. The building has cost £2,000. Mr. Morris (Architect to the County Education Authority) and Messrs. W. Slee & Sons, builders, of Barnstaple, have been responsible for building the school.

STEEL BARS FOR REINFORCED CONCRETE.

ONE object to be kept in view when designing structures of reinforced concrete is to prevent, or minimise, the cracking of surfaces exposed to tension. The employment of high-grade steel tension bars stressed only to a moderate degree is one of the best means to the desired end. If, instead of mild steel with an ultimate resistance of about 30 tons per square inch and an elastic modulus of 30,000,000 lb., we adopt a "medium" steel in which the foregoing figures are increased by one-third—ultimate resistance 40 tons and elastic modulus = 40,000,000 lb.—experience shows that cracks in the concrete rarely, if ever, occur, except when so minute as to be negligible, provided always that the working stress does not exceed that which is customary with mild steel, viz., 7 to 8 tons per sectional square inch.

It is characteristic of the above-named medium steel that bars of small diameter show a higher degree of strength per unit of sectional area than those of larger diameter. This is attributable to the fact that the smaller bars have undergone a greater amount of working in proportion to their size. We have, for example, found, in the course of some experimental tests, that $\frac{1}{2}$-in. circular bars showed an ultimate tensile resistance of over 42 tons per sectional square inch, whereas $\frac{3}{4}$-in. bars of the same material showed a resistance of only 38 to 39 tons. Hence, in designing, it would be more economical to employ eleven $\frac{3}{8}$-in. bars, with a combined ultimate resistance of 50·6 tons, than three $\frac{3}{4}$-in. bars, with a combined resistance of 50·7 tons. This would mean a saving of one $\frac{3}{8}$-in. bar, or about $4\frac{1}{2}$ lb. per foot run of bars; while the amount of surface available for the adhesion of concrete with the larger number of small-sized bars would be nearly doubled.

From numerous experiments upon mild steel bars we are unable to find any difference in strength per unit of sectional area between bars of small as compared with those of large diameter. The principal advantage of using mild steel arises, of course, from its extreme ductility. Thus, for example, we have found, from experiments upon mild steel, as much as 30 per cent. elongation in a length of 8 in.; whereas medium steel rarely shows more than 15 per cent. Nevertheless, in this latter material circular bars can be bent cold to any angle required in reinforced concrete construction.

It might seem superfluous to issue a word of caution as to the importance of ensuring that bars shall always be supplied of the sizes specified; but experience warns us of the necessity of constant vigilance in this respect. In one case we have found that bars supplied as nominally 1 in. square were actually only $\frac{7}{8}$ in. square. This means a deficiency of nearly 25 per cent. in sectional area. In round bars we have occasionally found even more serious shortages in diameter. Thus, bars nominally $\frac{3}{4}$ in. were, in one case, found to be 25 per cent. less, which means a reduction of 44 per cent. on the sectional area; and such a bar, if nominally stressed to 8 tons, would be actually stressed to over 14 tons per sectional square inch. Such extreme cases are, of course, exceptional.

Much has been said and written in favour of an indented form for tension bars. It may be observed that, in the case of an ordinary unindented bar, the resistance to displacement by drawing out arises from the adhesion of the concrete to the steel. In an indented bar the resistance is due to the cohesive strength of the concrete between the unindented portions of the bar. We have heard it suggested that, since the resistance in either case is to be overcome by shearing, there is practically no difference between the two forms of bar. We would point out that in the case of an ordinary bar the shearing would take place upon a straight joint between two different materials, whereas in an indented bar it would be through an irregularly bonded material. In either case we have little absolute data for our guidance. Perhaps some readers of this journal can throw some light upon the question from their own experience.

Q. E. D.

KING WILLIAM-STREET.

THE transformation of this street has been very rapid. Beginning with the end next the Mansion House, first came the imposing block for the Scottish Union and Provident Association, by Messrs. Dunn & Watson, now to be extended as far as St. Swithin's-lane, over the site of the old Gresham Club, which is to be rebuilt in Abchurch-lane. Going southwards on this side we have the austere little corner building of the Clerical Medical and General Insurance Company. Next comes the only gap in the line at the corner of Sherborne-lane. This corner, not being in the same ownership, may remain in its present state for many years. The next block up to Abchurch-lane contains the fine new offices of the Phœnix Assurance Company, by Messrs. Macvicar Anderson & Son.* Following this up to Nicholas-lane, we have the new premises of the Comptoir National d'Escompte de Paris, now being built. It is a pity this site is of such an awkward shape, but the powers of the Corporation in the days when King William-street was formed were limited, when only properties immediately infringing on the new street could be acquired, thus forming very irregular sites. This difficulty has been overcome in the next block by an arrangement whereby the City Lands Committee acquired adjoining lands upon the assurance that a lessee was forthcoming for the new site when so made. This island site will be one of the most prominent and valuable positions in the City. The war has temporarily delayed its development.

On the other side of the street the whole of the rounded corner facing London Bridge will probably be rebuilt. The portion in Gracechurch-street belonging to the City Lands Committee was let to Mr. Howell Williams, who intends to erect a large block of commercial offices. Adjoining it is a block in which the leases expire in about two years. At the corner of Clement-lane the Norwich Union has erected a small branch office. Proceeding north, on the site of the old London and Lancashire Offices will be shortly erected a new block of offices by Messrs. Trehearne & Norman upon an enlarged area formed by the acquisition of the back property.

At the corner of Nicholas-lane a small building is in course of erection by Messrs. Metcalf & Greig.

This side of the street was partly rebuilt about 1880, and no more leases will fall in now for many years. The only other change since the street was formed is that which was caused by the building of the Bank Station of the City and South London Railway under the church of St Mary Woolnoth.

The new aspect of the street, although not perhaps so dignified and reticent as the old, will nevertheless be as fine as any in the City. The old heights are increased, and will now give a street of equal width and height. This is the inevitable result of the Building Act Regulations and our ancient light conventions. In our view it is a proportion less satisfactory than an excess in either direction would give. The best results are got when the buildings either do not exceed three-quarters of the width or are allowed to go up to one and a half times the width. We might learn a good deal from the American and Continental rules about heights of buildings, and the next revision of the Act should certainly deal with this point.

NEW ALTAR FOR CHURCH AT KELSO.

A new high altar has been erected in the church at Kelso, Roxburghshire. The altar, which was designed by Mr. Archibald Macpherson, F.R.I.B.A., is built of Swinton stone, with a baldachino of Spanish mahogany.

A NEW CALENDAR.

We have received from Messrs. F. Troy & Co., builders, decorators, and electrical engineers, 194 and 196, Finchley-road, N.W., a neat little calendar for 1916 which shows an excellent colour reproduction of the picture entitled "Every Little Helps," by A. W. Strutt, R.C.A., A.R.E., with a monthly calendar attached below.

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* See our issue for January 7.

REINFORCED CONCRETE.

WE have received the following letter in reference to the paper by Mr. Kearns, read before the Surveyors' Institution recently, and reported in our last issue:—

SIR,—In the report of the paper read by Mr. R. Kearns, before the Surveyors' Institution, which is included in your last issue, you state that Mr. Kearns made allusions to the New Cathedral at Demerara (which is now being constructed to the designs of Mr. Leonard Stokes, upon the Considère system of construction), and also ask whether there is any cause why the rods in beams should not be made larger in section and fewer in number.

You will probably receive letters from other correspondents, giving the reasons against this proposal, but, in case you do not, it may be useful to point them out as concisely as possible.

In reinforced concrete the tensile stress in the steel bars is only transmitted to them through the medium of the concrete, and this transmission of stress is only possible on account of the adhesion of the concrete to the steel.

Since the area of a round bar varies as the square of the diameter, whereas the perimeter is only directly proportional to it, it is obvious that, for any given sectional area, the largest adhesive surface will be obtained by putting in a number of bars of as small diameter as possible. The new London County Council Regulations are stringent on this point, and will control the diameters of bars pretty effectively.

With bars of large size and few in number there is no possibility of their full tensile value being developed, as they would undoubtedly slip before their full strength was realised. The possibility of slipping can, of course, be guarded against by the introduction of the Considère hook at the ends of the bar (as suggested by the London County Council Regulations), but in good design it is better to regard this hook as offering additional security, and not to count upon it in the first instance as assisting in the transmission of stress from the concrete to the steel. As the adhesion may be regarded as constant throughout the length of the bar it is only the increment of strength per unit length which has to be transmitted from the concrete to the steel, whereas, if there was no adhesion and the bars were only held by the hooks at the end, the tensile force would be constant to the end of the bar, and the whole of the anchoring would have to be done by the hook.

This would be rather analogous to placing one huge rivet at each end in building a girder, instead of a number of small rivets spaced along the entire length of the plate.

CONSIDÈRE CONSTRUCTION COMPANY, LTD.
(Herbert E. Steinberg).

CONSTRUCTION NOTE.

Grain Elevator Plant, South Chicago.

THE John S. Metcalf Company, Ltd., Southampton-street, Strand, London, W.C., has recently been retained by the Chicago and North-Western Railway Company to act as designing and consulting engineers for their new grain elevator plant at South Chicago. This plant will be operated by the Armour Grain Company. It comprises a working house of a million bushels capacity, with facilities for receiving grain at the rate of 360 cars in ten hours and shipping to cars at the same rate. At the same time it will be arranged to dry 90,000 bushels of grain and bleach 240,000 bushels of oats in ten hours, besides enormous clipping and cleaning capacities. There will be a marine tower for receiving from vessels at the rate of 20,000 bushels per hour, and a river house equipped to ship to boats at the rate of 120,000 bushels of grain per hour, and with a shipping gallery to carry grain out along the wharf for trimming the vessels after they have received the bulk of their load at the river house. Between the working house and the river house there will be a storage house, which will bring the ultimate storage capacity of the plant to approximately 10,000,000 bushels. All the machinery will be electrically driven, deriving power from a complete independent power plant of 4,700 horse-power. Water tube boilers and turbo-generators will be used. Complete facilities will be provided for collecting the dust caused by the handling and cleaning of the grain and for sacking this dust or loading in bulk. An independent office building for convenience of the operators, a welfare building for employees, a shop building, and 1,200 ft. of wharf are also included in the work. The headquarters of the John S. Metcalf Company, Ltd., is in Montreal, Canada, with branches in London and Chicago.

ARCHITECTURAL SOCIETIES.

Nottingham and Derby Architectural Society.

The second meeting of the winter session of this Society was held at the Society's room on the 11th inst. Mr. F. M. Royle, the Hon. Secretary, informed those present that a Christmas greeting had been sent on behalf of the Society to each of the twenty-six members on active service, to which the President and Vice-President had added a box of cigarettes. He had received very interesting replies, thanking the members for their kind wishes. The President proposed that a selection of the letters might be made and printed in the next annual Report, and this suggestion was agreed to.

After the disposal of other business the members adjourned to the lecture-room, where the Rev. F. N. Heazell, M.A., F.R.G.S., delivered a lecture on "Baalbeck and Damascus," which he illustrated by a number of lantern slides, mostly prepared from photographs taken by himself. He stated that Baalbeck is reached from Aleppo by a railway journey of eleven hours. The chief object of interest is the ruins of the great Temple of the Sun. In the time of the Roman Emperors, Baalbeck was the central point of an Oriental form of worship which had existed from very early times. The ruins are entered by a modern flight of steps, which lead to the propylæa, and this admits to the hexagonal forecourt by means of three gates. Through the western gateway of the forecourt the Great Court—450 ft. by 400 ft.—is reached, surrounded on three sides by double rows of columns, while in the centre are the great altar of burnt offerings and the basins of lustration. On the fourth side of the court a great flight of steps led up to the front of the Temple of the Sun, a building 290 ft. long by 160 ft. wide, having a peristyle of fifty-four columns. Only six of these columns of a debased type of the Corinthian Order, and the bases only of many more, now remain. A short distance from this temple stands the Temple of Bacchus, perhaps the finest building in anything like a fair state of preservation i Syria and Palestine. The main entranc doorway is beautifully carved, but nothing o the roof remains. These wonderful building were probably erected by Antonius Pius between A.D. 130 and 160. The Empero Theodosius built a Christian church within th Great Court in the fourth century, while anothe part of the buildings has been used for Moslen worship.

The lecturer then showed views and gav a description of Damascus, which has bee called the oldest city in the world—the oldes city, that is, that has maintained a continuou existence from the days of its foundation unti the present time.

At the close the Vice-President, Mr. H. G Watkins, proposed and Mr. E. R. Sutton, Past President, seconded a vote of thanks to th lecturer for his interesting paper. The Re F. N. Heazell suitably replied, and the meetin terminated.

OBITUARY.

Mr. E. Clark.

The death is announced of Mr. Edwin Clar principal of a firm of builders, at Fishpond Bristol, who have been contractors for vario chapels erected in and around the city.

Mr. J. P. Sharp.

Mr. J. P. Sharp, a Birmingham architec of County-chambers, has died at his Mosel residence. He designed a good ma Birmingham buildings and took a leadi part in the development and construction Corporation-street.

THE BUILDING TRADE.

THE TIMBER TRADE.

MESSRS. FOY, MORGAN, & CO. have issued their annual Report, which contains some very interesting statistics. The imports into the United Kingdom and their value are for the last six years as under :—

1910	10,078,088 loads	£26,198,854
1911	9,740,436 ,,	25,847,077
1912	10,058,384 ,,	28,351,315
1913	11,589,811 ,,	33,789,356
1914	8.432,646 ,,	25,336,951
1915	7,665,524 ,,	32,778,764

The imports of soft woods sawn and planed, with which portion of the import the building trades are almost exclusively concerned, have been practically the same as in the previous year. As the war has now affected two shipping seasons, it is a matter for congratulation that the imports stand at within 20 per cent. of previous figures. The Board of Trade have suppressed certain figures relating to timber used for Government purposes, so the figures are vitiated to that extent. A fair estimate of the proportion in which the £7,000.000 extra paid for the same quantity of wood imported would be to put down £2,000,000 as the extra price paid, and £5,000,000 for extra shipping charges.

The fluctuations of the freight rates in the average import cost per standard year by year and the influence of high freights are shown in the following figures :—

	£ s. d.		£ s. d.
1907	9 11 0	1912	9 18 3
1908	8 16 6	1913	10 9 3
1909	9 0 3	1914	10 13 0
1910	9 9 3	1915	15 11 0
1911	9 9 0		

Russia, after steadily gaining on all competitors since 1901, when she first took the lead, has now dropped to a position of minor importance. In the year prior to the war Russian imports represented more than half the total import, but during the last season she has not even imported one-fifth of the total.

The following table of figures shows the stock of wood in the London public docks at the end of each year :—

PUBLIC DOCK STOCK ON DECEMBER 31.

		1913.	1914.	1915.
Deals (Fir)	Pieces	1,641,245	906,520	919,803
Battens (Fir)	,,	2,255,876	1,240.190	1,871.899
Pine	,,	596.825	498,613	421.276
Spruce	,,	883.158	687,709	1,181,476
Pitch-Pine Deals	,,	86,410	49,292	21,822
Deals and Battens in aggregate	,,	5,463,514	3,382,324	4,416,276
Rough Boards	,,	8,303,439	7,247,857	7,895,545
Planed Boards	,,	4,382,952	4,622,989	4.128,150
Floated Timber	Loads	27,000	26,500	6,402

The following are the statistics of consumption within the London district :—

DELIVERIES OVERSIDE IN THE FOLLOWING YEARS.

	1913.	1914.	1915.
Sawn Deals, etc.	158,858	167,306	165,941
Planed Boards	28,433	38,582	35,518

DELIVERIES FROM THE DOCKS IN THE FOLLOWING YEARS.

(In Cubic Measurement.)

	1913.	1914.	1915.
Sawn Deals, etc.	91,763	98,855	87,288
Planed Boards	26,010	28,139	29,309
Floated Timber	33,582	41,836	34,420

The More Important Items in Pieces.

	1913.	1914.	1915.
Deals (Fir)	2,321,366	2,450,212	1,625,510
Battens (Fir)	4,138,448	4,024,081	3,858,427
Pine	340,193	320,284	412,328
Spruce	544,725	758,671	866,624
Pitch-Pine Planks	45,486	83,867	55,449
Deals and Battens in aggregate	7,390,218	7,637,115	6,818,338

ANNUAL IMPORT INTO LONDON, JANUARY 1 TO DECEMBER 31.

		1913.	1914.	1915.
Deals (Fir)	Pieces	6,712,627	5,883.214	4,380,565
Battens (Fir)	,,	11,103,925	9,635,430	12,940,114
Pine	,,	956,333	854,484	1.124,884
Spruce	,,	1.805,007	1,975.316	3,225,041
Pitch-Pine Deals*	,,	109,913	46,749	27.979
Deals and Battens in aggregate	,,	20,687,805	18,395,193	21,698.583
Rough Boards	,,	24,779,607	21,431,356	20,865,666
Planed Boards	,,	16,791,787	21,629,798	20,583,024
Floated Timber	Loads	44,973	40,682	13,707

* The Pitch-Pine import excludes any delivered overside.

RATIO OF IMPORT TO CONSUMPTION (DOCK AND OVERSIDE) IN THE FOLLOWING YEARS.

	1913. Per Cent.	1914. Per Cent.	1915. Per Cent.
Deals (Fir)	106	89	92
Battens (Fir)	98	89	115
Pine	103	99	93
Spruce	121	97	127
Pitch-Pine Planks *(Dock only)*	242	56	50
Deals and Battens in aggregate	103	90	110
Rough Boards	117	92	102
Planed Boards	93	100	97
Floated Timber	134	99	41

The trade as far as hardwoods are concerned is of less interest to the building industry, but we may mention that the decrease in the year's imports of mahogany amounted to 73 per cent. as compared with 1914, and the imports of other hardwoods used in cabinet-making and decorative work showed similar reductions. Teak imports, on the other hand, only fell off some 10 per cent. as compared with those of the previous year.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The T.C. has approved plans of two dwelling-houses, each for two tenants, one dwelling-house for four tenants, and additions to engineering works and comb works.

Abergavenny.—At a recent meeting of the B.G. the Clerk suggested that the Guardians should take steps towards the appointment of an architect for the proposed new workhouse, and it was decided to ask the opinion of the L.G.B. on the matter.

Aldershot.—Plans passed by the D.C.:—Alterations and additions, 22, Station-road, Mr. John Eighteen; reconstruction of premises, Redan-hill, Messrs. R. Bateman & Sons.

Barrow.—The T.C. has approved of an application received from the Salvation Army authorities in connection with a proposed enlargement of the Salvation Army War Workers' Hostel. The T.C. has approved a perspective elevation of the Labour Exchange Building, Duke-street, submitted by H.M. Office of Works.

Bath.—The War Office has been requested to erect the building required for the sub-station at the Bath War Hospital.

Bletchley.—The U.D.C. has passed plans for a garage in High-street for Mr. Jacobs.

Bournemouth.—Plans passed by the B.C.:—Additions, Capital and Counties Bank, Old Christchurch-road, the Capital and Counties Banking Company; additions, 402 and 404, Holdenhurst-road, the Parkstone and Bournemouth Co-operative Society; alterations, "The Dunes," Southern-road, the Rev. C. W. Lloyd Evans; alterations, "Morningside," Bay View-road, Mr. G. Grant; alterations to stables, Castle Laundry, Castle-road, Mr. R. Bevington; alterations to stables, rear of "Aysgarth," Poole-road, Mr. C. Williams; amended plan of house, site 43, Montagu-road, Mr. H. B. Mudge; covering for vans, etc., Victoria-road, Mr. C. W. Powell; motor house, site 215, Dunbar-road, Messrs. Jones & Seward; additions to garage, Nos. 1 and 3, Parker-road, Mr. T. Dean; alterations, "Albany Hotel," Holdenhurst-road, Mr. F. J. Hall; additions, Grosvenor garage, Poole-hill, the Grosvenor Garage Company; amended plan of house, plot 180, Keswick-road, Mr. R. Collins; bungalow, plot 4, Watcombe-road, Mr. W. Chadwick; motor house, etc., plot 19, Wentworth-avenue, Mr. J. Newbury; house, Cecil-avenue, Mr. H. V. Eastwell; garage, plot 51, Wentworth-avenue, Messrs. Burridge & Bovil; house, stabling, corner East-avenue and Berwick-road, Mr. J. Kingham; house, plot 73, Chessel-avenue, Mr. J. S. Brown.

Bromsgrove.—The L.G.B. has finally approved the Rubery town-planning scheme promoted by the North Bromsgrove U.D.C.

Burton-on-Trent.—At a recent meeting of the T.C. it was announced that an important firm had purchased a site of 50 acres of land at Horninglow, for the establishment of works, and that building operations would shortly commence.

Calcutta.—We learn that work is to be started almost immediately with the building of the hospital for tropical diseases, which is to form an annexe to the School of Tropical Medicine in Calcutta.

Cardiff.—The hospital authorities announce an anonymous gift of £10,500 to King Edward's Hospital, Cardiff, towards the cost of new extensions.

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* See also our list of Competitions, Contracts, etc., on page 78.

Colombia.—The *Diario Oficial* (Bogotá) of November 10 last publishes a law empowering the "Junta Central de Higiene" to undertake the construction of a sanitary station in the port of Buenaventura similar to the existing station at Santa Marta. The same law also allots the sum of 10,000 pesos gold (£2,000) for the completion of sanitary buildings, for the bacteriological laboratory, and for the construction of a wharf at the sanitary station of Santa Marta.

Cupar.—The heritors have agreed to execute certain structural and other improvements to the manse at a total cost of about £260. Mr. Charles Storrar, architect, has the work in hand.

Deemount.—The Aberdeen T.C. has had under consideration the proposed erection of a number of houses on the garden colony system at Deemount.

Dewsbury.—Plans passed by the T.C.:—Water tower at Jilling Ing Mills, Earlsheaton, for Messrs. S. Lyles, Sons, & Co., Ltd.; additions to Wire Works, Mill-street East, Savile Town, for Messrs. H. Spencer & Co.

Folkestone.—Plans passed by the T.C.:—Plans submitted by the Hon. Miss F. Daly (owner) (Mr. C. D. Jenner, architect, Mr. C. Jenner, builder) for a temporary recreation-room at Manor House Hospital, Earl's-avenue; plans submitted by Mrs. P. W. Apps (owner) (Mr. G. H. Camburn, architect) for alterations and additions at Pleydell House, Bouverie-road West.

Girvan.—The Burgh Surveyor has submitted a report on the present water works and schemes for the extension of the water supply, with relative plans, etc. The Council has visited the Balceachie district, and inspected the site of the proposed new reservoir, and has also visited Glendoune burn with a view of ascertaining if a supply of water could be got there.

Glasgow.—Glasgow Dean of Guild Court has granted the following linings:—The North British Railway Company, to convert into general offices the building known as the Royal Hotel in George-square; Messrs. William Cooper & Nephews, chemical manufacturers, Lochburn, Maryhill, to erect buildings for offices, workers' block, pump-house, mechanics' shop, laboratory, joiners' shop, etc., at Lochburn; Mr. James Howden's trustees, to erect a boatbuilding shed at 685, South-street, Whiteinch.

Greenock.—The Corporation has decided to erect over a hundred cottage houses for workers at the east end of the town, estimated to cost £35,000.

Hexham.—The U.D.C. has approved a plan submitted by Mr. M. Hall, on behalf of Mr. J. Hutchinson, for a cartshed to be erected at New Court, Priestpopple.

Holmfirth.—The Holmfirth Council is preparing to begin its housing scheme, which provides for building on Newmill-road twelve houses at £250 each and thirty at £230 each.

Huntingdon.—The T.C. is considering plans of the proposed refuse destructor.

Jarrow.—The Palmer Shipbuilding and Iron Company propose to build a quay, 500 ft. long, from the Corporation Quay westwards.

Leyland.—The U.D.C. has passed a plan of proposed boiler-house and chimney for Wood Milnes, Ltd.

Longniddry.—The Scottish Veterans' Garden City Association has accepted the offer of ground at Longniddry as a site for the local Garden City scheme. The consulting architect stated that the first section, which might now be proceeded with, would embrace forty houses and two workshops, and extension could take place later.

Matlock.—The Urban Council has adopted the scheme for providing a water supply to the district of Riber, by means of a windmill, etc.

Mitcham.—The U.D.C. has approved the following plans for new buildings:—Mr. J. Wilson, two dwelling-houses, Ashbourne-road; Mitcham Margarine Company, additions to Woodite Works Factory, Commonside East; Mr. A. L. Lambert, motor garage, 18, Garden-avenue; alterations at Messrs. T. Parsons & Sons.

New Mills.—The Council's seal has been affixed to a plan of proposed new stables for Messrs. R. Wilson & Co. on Buxton-road.

Oldbury.—The U.D.C. has approved of the following building plan:—Mr. W. Dearn, conversion of one house into two, Clay-lane, Langley.

Penmore.—The L.G.B. has now given its sanction to the borrowing by the Derbyshire C.C. of the following amounts in respect of the extension of the Penmore Isolation Hospital:—£4,790 for thirty years for new buildings; £945 for ten years for furniture, fittings, boundary walls, fencing, etc.

Prudhoe.—The plans for the housing scheme, in accordance with the suggestions of the L.G.B., have been approved by the Council.

St. Annes (Lancs).—The question of the erection of a floral hall in the Ashton Gardens is under consideration by the Council.

Sheffield.—Sheffield is suffering from a very real housing famine, caused by the influx of munition workers, and the civic authorities are doing their best to tackle the problem. The City Council has just adopted a scheme for the erection of permanent and temporary homes and hostels at a cost of about £300,000. Over 260 permanent houses are to be built at once on estates owned by the municipality, and temporary houses, hostels, and colony blocks which will accommodate 4,631 workers, at a cost of nearly £200,000.

Skegness.—Plans have now been prepared by Mr. Percy Houfton, of Chesterfield, for the Derbyshire Miners' Convalescent Home at Skegness. A site for the proposed home has been secured at the extreme northern end of Skegness, approached by a short length of road from Roman Bank.

Stonehaven.—Plans for the erection of several semi-detached villas in Victoria-street have been before the T.C.

Swansea.—Another big cinema enterprise is being mooted in Swansea. The building is estimated to cost between £5,000 and £7,000. The site is off High-street.

Ulverston.—The U.D.C. has approved plans of two pairs of semi-detached villas in King's-road.

Watford.—The following plans have been recommended to the U.D.C. for approval:—New shop and premises, next to 116, High-street, for Messrs. Bottom Bros.; temporary chemical factory for the Cooper Laboratory for Economic Research, Rickmansworth-road.

West Hartlepool.—The T.C. has approved the following plan:—Mr. W. Kirby, motor garage, Stockton-road and Blakelock-road, as a temporary building. The T.C. has received a notification from the North-Eastern Railway Company, with plan, of their intention to improve the Burn-road sidings. Plan and estimate for the construction of Back Percy-street and Bellerby-terrace and Ashley-gardens have been approved by the T.C.

Wick.—Wick Harbour Trust has received intimation that the Commissioners of the Treasury have recommended an advance from the Development Fund to the Trustees of a sum not exceeding £31,260 for the execution of works. The specified works include the preservation of the existing works, and particularly the repair of the south quay and the restoration of the damaged north side of the river.

Woolwich.—The justices have given consent to alterations in respect of the Royal Ordnance Arms beerhouse, Ordnance-road, Woolwich, and the Fox-under-the-Hill, Shooter's Hill-road.

GENERAL BUILDING NEWS.

CHURCH, STONEYCROFT.

The new church of St. Paul, Stoneycroft, has recently been consecrated by the Lord Bishop of Liverpool. The church has been erected on a site at the corner of Derby-lane and Derwent-road. The first stone of the old St. Paul's Church was laid on April 4, 1763. The new St. Paul's Church has been designed by Mr. Gilbert Scott, the architect of the Liverpool Cathedral. The building is of grey brick, specially made at Ruabon for this work, and is roofed with red tiles. The walls are plastered, with brick drawings, and there is a panelling of wood all round. The aisles are laid in grey and white tiles, and the seating consists of rush-bottomed chairs arranged on a flooring of wooden blocks.

GOLF CLUBHOUSE, FURNESS.

The new club house which has been erected for the Furness Golf Club has recently been opened. The building is situated on a site overlooking the Irish Sea, at the junction of Moor Tarn-lane and the new road at present being made from the end of Walney Bridge. On the ground floor there is a spacious hall, from which open the following rooms:—Gentlemen's locker-room, smoking-room, lavatory, secretary's office, ladies' locker-room, ladies' private room, and ladies' lavatory. On the first floor is situated an upper hall, from which opens a large luncheon-room. The club-kitchen, pantry, and caretaker's house are also situated on this floor, and a large balcony opens out from the luncheon-room. The building, which is heated throughout by a hot-water system, is built of brick and rough-casted. The contractors for the whole of the building are Messrs. Rainey Brothers, and for the furnishings, Messrs. Hampton & Sons, London; the architect being Mr. Arthur H. Taylor, Walney.

TRADE NEWS.

Under the direction of Messrs. Hyams & Hobgen, architects, Paignton, Boyle's latest patent "air-pump" ventilator has been applied to Deller's New Café, Exeter.

We hear that the Board of Public Works have been making extensions to the G.P.O., Dublin, and that the powder "Pudlo" has been used for making some of the cement watertight.

The premises of the Publisher's Waste Company, Manchester, are being warmed by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

NEW COMPANIES.

THE undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.

H. & J. MATTHEWS, LTD. (142,552), Castle-street, Berkhamsted, Hertford. Registered December 29. To acquire, take over, and to carry on the business now carried on by H. & J. Matthews as H. & J. Matthews at Berkhamsted, Hertford, and to carry on business of contractors joiners, builders, wheelwrights, smiths, hot water engineers, coal merchants, brick makers, and stone merchants, electrical engineers, etc. Nominal capital, £5,000 in 5,000 £1 Ordinary shares.

THOMAS SMITH & SON, LTD. (142,587). Registered December 31. To carry on busines of manufacturers of oil-colour paint, whitelead, enamel, and varnish, colour grinders, timber lime, and cement merchants, gas, electrical, mechanical, and sanitary engineers, builders, shippers, wharfingers, warehousemen, etc Nominal capital, £25,000 in 2,500 £10 shares.

C. A. VANDERVELL & CO., LTD. (142,593) Warple Way, Acton Vale. Registered January 1. To carry on business of electrica engineers, manufacturers of dynamos, lighting equipments, accumulators and other moto accessories, and Government contractors, now carried on by C. A. Vandervell at above address and to carry on business of iron and stee converters, builders, etc. Nominal capital £350,000 in 300,000 £1 ordinary shares, and 1,000,000 1s. deferred shares.

COLLINSON & CO., LTD. (142,604), 56, Walpole road, Teddington. Registered January 3. T carry on business of builders, decorators, worker in and manufacturers of machinery of al kinds, tools, iron, steel, and other metals contractors, dealers in stone, lime, sand bricks, and other building requisites, electrica engineers, dealers in motor-cars, etc. Nomina capital, £2,500 in 2,500 £1 ordinary shares.

ISAAC WARD, LTD. (142,607), Progres Works, Byrern-street, Blackburn. Registere January 3. To acquire from S. Ward, c Blackburn, and carry on business now carrie on by him at Blackburn, as Isaac Ward, busines of general mill furnishers, manufacturers c appliances and plant in connection therewith ironmongers, engineers, brass and iron founders builders, plumbers, gasfitters, and lightin engineers, designers, etc. Nominal capita £1,000 in 1,000 £1 shares.

J. F. GOODWILLIE, LTD. (142,628 Registered January 5. To acquire and tak over business of timber merchant and coope carried on by S. H. Goodwillie at St. Matthew Wharf and Mount Pleasant, and 40, North street, Gosport, Hants, as J. F. Goodwillie, an to carry on business of builders, contractor painters, manufacturers of bricks, tiles, pottery earthenware, terra-cotta, china, etc. Nomina capital, £5,000 in 5,000 £1 ordinary shares.

HENRY ALLEN, LTD. (142,638), 101, Amhurs road, Hackney, N.E. Registered January To carry on business of cartage contractor builders, builders' merchants, excavator dealers in agricultural and horticultural requir ments, produce and horses. Nominal capita £5,000 in 5,000 £1 shares.

SIR JOHN GUNN & CO., LTD. (142,640 Registered January 6. To carry on trade coal, coke, and fuel exporters and merchant factories and colliery owners, quarrymen, an brickmakers, builders, dealers in ships, barge and craft of all kinds, insurers, carriers, et Nominal capital, £50,000 in 500 £100 shares.

J. LORD, LTD. (142,650), 40, St. Peter's-gat Stockport. Registered January 7. To car on business of furnace makers and deale makers of materials required in said busine iron founders, mechanical engineers, toolmake brass founders, builders, painters, etc. Nomir capital, £2,000 in 2,000 £1 shares.

ROWELL, LTD. (142,653), Woodsic Wrekenton, Gateshead, Durham. Register January 7. To carry on business of proper owners, builders and contractors, house a estate agents, and any other trade in connecti therewith. Nominal capital, £5,000 in 3 £10 ordinary shares and 300 £5 preference shar

FOREIGN AND COLONIAL.

Catalogues and Price Lists of British Goods for China.

H.M. Commercial Attaché at Peking (Mr. V. P. Ker, C.M.G.) reports that the Chinese Ministry of Agriculture and Commerce have ecently established a Commercial and Industrial 'ommission whose object is the collection of tatistics and the development of trade in China, nd that this Commission desires to receive opies of catalogues issued by United Kingdom nanufacturers. United Kingdom manufacurers and exporters of United Kingdom goods who may be interested should address atalogues and price lists of their goods to he Commercial and Industrial Commission, Ministry of Agriculture and Commerce, Peking.

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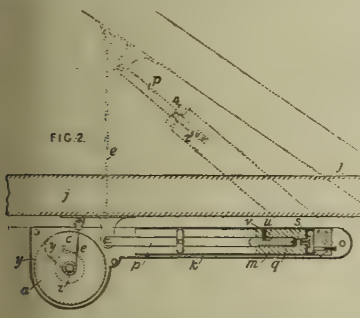
SELECTED PATENTS.

17,376 of 1914.—Percy Alliott Smithurst: Door springs and checks.

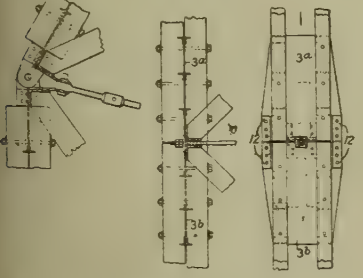
This relates to a combined spring doorcloser and piston check, in which the spring lrum *a* is provided with a groove *y*, either in he form of a fusee or a cylindrical helix, and n which the cord *e* attached to the door *j* s wound, the groove having a sudden cutoff so that extra force is applied to overcome he resistance of the latch. The groove *y* eaves the surface of the drum at y^1, and the ord *e* then winds on a drum *z* of smaller iameter. The piston *m* operates in a pivoted ylinder *k*, and has a lost-motion connection *v*, with the piston-rod *p*, so that air can enter e cylinder through the slot *q* and the passage when the piston is moving out. A blade ring 2 may be provided on the cylinder to ngage an adjustable disc 4 on the piston-rod hold the door open. The cord may be etached from the door so that the check lone is in operation.



17,376 of 1914.

17,395 of 1914.—Ballonhallenbauges: Girders.

This relates to a bar connection for trussed lattice-work of the Howe type, applicable hangar girders and framework, consisting a pair of metal plates 3^a, 3^b, or a single plate ranged at the centre of gravity of the compund chord or boom and transversely to the ane of the girder. The two plates are nnected by fish-plates 12, and the diagonals d verticals are so connected that the forces ting at the joint are concurrent. The fishates may be bent for angle joints, or hinged r hinged joints.



17,395 of 1914.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8½	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	9	8½	8¼	8	7½	5½	5½	6
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¼	8½	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10	10	10¼	10	10	10	8½	7½	7½	7½
Leicester	10¼	10	10½	10½	10	10	9	7½	7½	7½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10	10	10	10½	9½	10	9	7½	7½	8
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9	9	9	9	9	9	8	6½	6½	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9¼	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	10½	10	10	10½	9½	10	9¼	6	6½	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9¼	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6½	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9½	9	9½	9½	9	8½	7	7	7

The masons' rate given is for bankers; fixers usually ½d. per hour extra.

THE SOCIETY OF ARCHITECTS.

We take the following from the Report of the Council of the Society of Architects for the year ended October 31, 1915. The Report was adopted at the annual general meeting on the 13th inst.:—

The Thirty-first Annual Report of the Council covers a period of twelve months, during which time the first consideration of most people has been the call and response to active service of some kind tending to the successful prosecution of the war against the common enemy. Matters of personal and professional interest have taken for the time being a secondary place, but they have demanded from this very fact an even more anxious and careful attention than might be called for under normal circumstances. At the last annual general meeting the view was expressed by a representative of the general body of members that the Society must be prepared for a less favourable Report on the next occasion. The Council trusts that the members will agree, after a perusal of the Report, that, while all the departments of the Society's work have been affected by the war, its position both numerically and financially has been not merely maintained, but more firmly established. This has been effected by a policy of economy which, while not interfering with the essential activities of the Society, has enabled the Council to conserve the individual interests of members, especially of those more seriously affected by the war than others, to consolidate the Society's resources, and to make what provision is humanly possible for future contingencies.

Twenty-one candidates have been elected to membership by ballot of the members, and one candidate and six students have been admitted to the respective registers by the Council. After allowing for deaths, resignations, lapses, removals, and transfers, the total membership on October 31 was 1,213, made up as shown. Last year's figures are given for comparison:—

	1915.	1914.
Honorary members ..	30	29
Retired members	25	23
Members	1,003	1,014
Graduates	7	7
Students	148	155
Total ..	1,213	1,228

Professional Practice. Attendances on Subcontractors.—As stated in the last Report, the Council was then in negotiation with the Surveyors' Institution on the question of the definition of the term "attendance," the proposal being that the subcontractor shall know precisely what services must be performed by him and rendered to him. The Council, after careful consideration of the memorandum, was able to approve in principle the recommendations of the Surveyors' Institution, but made some suggestions for alterations in detail. These related more particularly to descriptive items which it was thought might with advantage be summarised in the case of small contracts and set out fully in works of more importance. The Council also suggested an additional clause relating to the use of scaffolding. After further negotiations the Surveyors' Institution intimated that the suggestions made by the Society would be adopted when reissuing the circular on attendances on subcontractors. Full details relating to the matter were published in the March issue of the Society's *Journal*.

The Board of Agriculture and Fisheries, and Rural Cottages.—The attention of the Council was called on a question of principle to the issue by the Board of a Report containing designs, specifications, and working drawings of cottages, which document could be purchased for a nominal sum. In the Report there was no definite reference to the desirability of retaining an architect's services in order more fully to attain the object which the Advisory Committee had in view. The Council felt that the omission would tend to accentuate the feeling already existing among some private and public building owners that the services of an architect were superfluous in connection with work of this kind. It, therefore, entered a strong protest on the point to the Board. The Board's reply did not cause the Council to withdraw its observations or to change its opinion that an injustice had been done to the architectural profession by the publication of the Report in that form by a Government Department. The Council subsequently sent copies of the correspondence between the parties to the architectural Press and printed it in the Society's *Journal*, so that those concerned might draw their own conclusions. The majority of those who expressed their views on the subject upheld the action of the Society.

Professional Defence.—The services of the Advisory Committee were called in to consider whether a case submitted by a member involving an alleged infringement of copyright in a design was of such a character as would justify the Society in co-operating with the member in bringing an action to decide the point in the interests of the profession. The case was gone into very fully in all its bearings, and the findings of the Committee were placed at the disposal of the member concerned for his guidance.

The Practice Committee has been called upon frequently to advise members on points of practice, and from the acknowledgments received from the recipients it would seem that the assistance which has been rendered to them has been appreciated. The Committee has also had before it points relating to matters of professional etiquette. The questions raised have shown the desirability of strengthening the disciplinary powers of the Council, and a proposal to this end will presently be placed before the members by way of a proposed alteration to the Articles of Association. At the same time opportunity will be taken to suggest further revisions in other ways also, more particularly in the direction of a reconstitution of the Council so as to give a more definite proportional representation of country members thereon, and to secure more continuity of service than is possible under the present regulations.

Standard Documents.—The model form of conditions of building contract in the drafting of which the Council had the assistance of Mr. W. Valentine Ball, barrister-at-law, was the subject of discussion at a members' meeting in May. Since then other suggestions for revisions have been received from members, and the Council hopes it may be possible during the new session to report further progress. There are, however, questions of policy as well as of detail which require careful consideration, and some time must necessarily elapse before a definite announcement can be made.

In the meantime the Council has drawn up a number of forms for use under the London Building Act. They comprise the following:—

(1) Party Structure Notice.

(2) Party Fence Wall Notice.

(3) Party Wall Notice where adjoining lands are unbuilt on at the line of junction.

(4) External Wall Notice where projecting footings on adjoining lands are intended.

(5) Notice of intention to build within 10 ft. of and at a lower level than the foundations of an adjoining building.

(6) Counter Notice by Adjoining Owner who has been served with notice of intention to build within 10 ft. of and at a lower level than the foundations of his building.

(7) Notice to appoint a Surveyor.

(8) Notice to appoint a new Surveyor.

(9) Appointment of Surveyor on Default.

(10) Appointment of Third Surveyor.

(11) Notice Requiring Arbitration on a disputed dangerous Structure Notice and appointment of Owner's Surveyor.

(12) Appointment of a Third Surveyor as Arbitrator on a disputed Dangerous Structure Notice.

(13) Notice Requiring Arbitration on a disputed Dangerous Structure Notice and appointment of Owner's Surveyor.

(14) Appointment of a Third Surveyor as Arbitrator on a disputed Dangerous Structure Notice.

The Society's Parliamentary propaganda in this direction has been suspended during the war. The need of Registration in the interest of all concerned becomes more evident every day. The war itself has provided an object-lesson in the attitude of the Government
towards the profession as a body in placing
other hands very much work in connection wi
war contracts which might well have be
allotted to architects, even if only as son
compensation for its action—no doubt a ve
necessary one at the moment from the Gover
ment point of view of discouraging pub
and private expenditure on building operation
Until architects have a legal status, and a
properly organised, they cannot expect
receive as a body that recognition which oth
protected professions can claim. The effo
of architectural bodies in other parts of t
Empire are all in the direction of statuto
Registration, and in several of the Dominio
success has been attained, and in others t
question of Registration is still being debate
with a view to further action at an early dat

In South Africa the Society's branch
actively supporting a proposal for the extensi
of the Transvaal Architects' Act to the Uni
of South Africa, and has undertaken to gi
the Cape Institute of Architects not o
moral but substantial financial support
this end. It is stated that in Queensland th
is a Registration Bill under consideration
the Cabinet, and that the Royal Victori
Institute of Architects are pushing forward w
a Bill based on the lines of the Transv
Architects' Act. Similar steps are being tak
in Tasmania and South Australia, and Regist
-tion is understood to be in force in New Yo
Michigan, and Florida. These centres are
addition to others which have already secu
Registration. The list is incomplete, but
serves to show how the principle for which
Society has contended for so long and is s
contending is becoming increasingly recogni
by other architectural institutions, and
those sections of communities having deali
with architects.

The Council, at the commencement of
session, renewed its permission for the Bea
Arts Committee to use the Society's prem
for its meetings, and the services of the Secret
and of the clerical staff for carrying on
business.

The war has affected the influx of
members into the Atelier, but the work
been continued on the same lines as bef
although under somewhat different conditi
The Sous Patron, M. Chaurès, who has b
with the Army of France since the outbrea
war, has been seriously wounded. All
eligible members of the Atelier have enliste
obtained commissions, and several of the m
promising of them have been killed in actio

Members who have read the *Journal*
have noted how the movement initiated by
Beaux-Arts Committee at home, with
assistance of the Society, has borne fruit in
creation of a similar movement in New Zeal
and in the suggestion of educational work
these lines in South Africa. It is interes
to recall how the proposal, when first g
practical effect to by the Society of Archit
was received with coldness by some who
since become converted to the views of
Beaux-Arts Committee.

The Society is represented on the Archit
War Committee and its subsidiary commit
one of the most important of which is
Professional Employment Committee.
body carries on its work at the Society's prem
with the aid of the Secretary and the cle
staff. The work of this Committee has
greatly developed during the past year.

The scheme of civic surveys, initiated
Mr. Lanchester, a member of the Commi
has received Government sanction and sup
and is now a separate department.
Council offered the promoters the use of
Society's premises for the survey work,
it was evident that the requirements w
include accommodation for a staff of drau
men and investigators, which it was be
the Society's present power to house.
work is being carried on at the R.I.B.A. Gall
and the provincial centres have been
established. Some of the work connected
this still falls upon the Professional Employ
Committee, but its chief work is in dealing
developments of the Society's original pro
for finding temporary paid work for arch
in distress owing to the war. This u
takes the form of measured drawing
descriptive reports on many and varied sul

and is distinct from the Government Civic Survey work. It may be remembered that, as an earnest of its desire to support the scheme for providing paid professional work, the Society made a donation of 100 guineas as the nucleus of a fund. The members of the Society have since augmented this to a total of £175 10s. 3d.

BOOK REVIEW.

Levelling and its General Application. By THOMAS HOLLOWAY. Revised by H. T. TALLACK. (London: E. & F. N. Spon, Ltd. Price 2s. 6d. net.)

THIS is the third edition of an excellent little book dealing with the art of levelling in a simple manner, which renders it eminently suitable for the uninitiated, and it can be recommended to architects' and engineers' pupils and assistants who are commencing their studies. The general principles of levelling are first explained and the various instruments described, and from these the reader is taken to the actual process of taking levels under different conditions.

Examples are fully illustrated, together with explanations for the use of the field book, and hints as to procedure are given for the beginner. A chapter is devoted to the use of the theodolite and another to town levelling, while other sections of the book describe special cases such as the crossing of a river.

A series of examination papers are attached at the end of the book for the use of the student.

It is quite impossible to learn levelling entirely from the study of books, as actual field lessons are absolutely essential to the beginner in order that he may understand the instruments and their adjustments; but a good groundwork can be obtained which will be of value when on the field for the first time or two, and we consider that this book will prove to be of great assistance for this purpose.

LAW REPORTS.

Thermit Process of Welding Tramlines and Building Girders.

THE Thermit process for the welding of tramlines and building girders was the subject of an application in the Patents Court recently.

A twelvemonth since, Messrs. Blackwell & Turner applied for, and were given, the title to use the two foundation patents of this process, which belongs to Thermit, Ltd., of 27, Martin's-lane, E.C., and they now asked under their new name of the British Thermit Company, Ltd., of 49 and 51, The Albany, Liverpool, for licence to use eight other patents relating to the same process, all belonging to Thermit, Ltd. The two patents already obtained were Nos. 10,859 of 1901 and 24,439 of 1902. The eight patents of the present application were Nos. 25,297 of 1904, 21,750 of 1909, 24,389 of 1910, 19,473 of 1911, 16,165 of 1912, 218 of 1913, 1,179 of 1913, and 26,180 of 1913.

For the applicants, Mr. E. R. Royston, Liverpool, said the substantial shareholding in Thermit, Ltd., was German, and the company was now being worked under a controller, and was supplying munitions to the Government. The applicants' alteration of name had had the approval of the Board of Trade, and the applicants were themselves doing a great deal of work for the Minister of Munitions. Thermit *per se* anybody might now use, but the processes covered by the eight patents were essential for right welding in the laying of tramlines and the erection of building girders. Various thermit compounds were used in the reheating of molten steel and iron, and the applicants, he submitted, ought not to be placed in any worse position, for the employment of this alumina-thermic method, than the respondent firms. Thermit, Ltd., were opposing. Mr. Blackwell, he should add, had experimented in the matter, and had used thermit for reducing metals and in obtaining tremendous heat for metals which moulded with difficulty, and for forming alloys. Tramway Corporations in the North of England and elsewhere were anxious that the applicants should be placed in a position to give them the full benefit of these processes. Of course the opponents were keen competitors, doing all they could to keep hold of this business to the last. It would be monstrous, however, for the applicants to be placed in a less satisfactory position for trading than Thermit, Ltd., especially in view of the German shareholding in that company. The patents applied for included clamping by screw force while welding was going on, fusing or welding the rails *in situ*, and an apparatus for securing accurate alignment and regular curves. The applicants needed these patents for authorities which were laying down rails both in this country and abroad.

Mr. Colefax, K.C., for the opponents, insisted that this was a general and promiscuous application for patents. One of the patents asked for had never been used in this country at all! Had Thermit, Ltd., possessed fifty patents they might all have been demanded in this cheerful way. As it was, the applicants had pretty well roped in all they had. He supposed the doctrine on which they acted was, "The more the merrier." The respondents were a registered British company using all these processes themselves, it was important to remember, and they were now under Government direction.

The Controller of Patents (Mr. Temple Franks, with whom sat the Deputy-Controller, Sir Cornelius Dalton) said he was sorry that what he had so often seen before had happened in this case. The British manufacturer, though he had the whole thing in his hands at one time, had left it alone and left it to the Germans to take the thing up and develop the process. He let, say, fifteen years go by, and then exclaimed, "What a deplorable thing it is that these Germans should be running this process!" That had happened with company after company in things the most important for the commerce of this country. The German company were perfectly right if the others were such fools as to allow them to do it. And they had been fools.

Mr. Colefax suggested that the Patents Court had been proceeding on the wrong line in its reading of the law in respect to the patents of alien enemies. The rules by which it had to work were not designed to give these patents into other hands if they were being satisfactorily worked for the good of this country. The rules had been misread. All that was required was that this country should not be left without its supply. Thermit, Ltd., had not only the ability and readiness to supply, but an experience and efficiency which rendered them more acceptable to British corporations. And they were under Government control.

The Controller of Patents: It will take a good deal to convince me that it is not to the general interest of the community or of trading generally that some independent English company should be sellers of a material of such great commercial uses as this. I certainly think they have made out a good *primâ facie* case.

Mr. William Lawrence Turner, managing director of the British Thermit Company, Ltd., said they were prepared to pay a royalty of 6d. per joint where any of the patent processes were used, and he supposed a corporation would pay roughly a sovereign for the thermit for each joint and another sovereign for the mechanical appliance. The applicants would effect perhaps three joints a night, or a thousand a year. But without the patents it was practically impossible for them to do any more than sell the thermit. Thermit, or a mixture of aluminium and oxide of iron, anybody might supply. The British Thermit Company would employ all the usual powders used in welding. They had different grades at their works at Garston for different purposes to suit all conditions of welding.

The Controller observed that he wished that the corporations, when they were not satisfied with any work, would come to the Court and complain.

Mr. Colefax answered that they would not do that, because they had always been satisfied with Thermit, Ltd.'s use of its own patents.

The Controller: My feeling is that, if one can secure the trade in this country, there ought not to be a monopoly of a purely German company doing for us highly important work of this character.

Mr. Colefax said he should have to submit (a) that the needs of the country were already satisfied; (b) that there was no chance of the suspension of the source of supply, or the agency through which the need of the public was met; and (c) that the applicants could not do the work, the process being largely a secret one.

Mr. Turner answered that ordinary workmen had carried it out on the Liverpool tramways, and it had been open to observation. The applicants knew what they were about.

Evidence as to the present position of Thermit, Ltd., was given by its Controller, appointed at the instance of the Board of Trade and the War Office—Mr. Arthur Taylor, of the firm of Messrs. Hudson, Smith, Briggs, Smith, & Taylor, chartered accountants, of Thames House, Queen-street-place, E.C. The respondent firm, he said, was registered at Somerset House. Mr. Stultz, in 1914, was appointed as committee of one to take control, but since his (the witness's) appointment additional plant had been set up, and the staff and the material used were now all British. Eighty per cent. of the firm's productions at the present time had relation to munitions.

Mr. John Baillie Hamilton, general manager of the Leeds City tramways, said he would prefer that Thermit, Ltd., supplied him. The Corporation did their own welding. To make a buffer joint required considerable skill on the part of the operators, as well as proper materials and appliances. The applicants' joints under test at Leeds had not stood the same strain as the respondents'.

The Controller said the Board of Trade would communicate with the British Thermit Company. He took a note of an alternative suggestion for royalty by Mr. Royston of 5 per cent. on the patent process, not the thermit, used.

Counsel on the other side said the amount should be half-a-crown a joint.

A Piecemeal Contract.

IN the Marylebone County Court, on January 6, before his Honour Sir W. Lucius Selfe, Mr. Robert Thomas Inman, builder, 22, Brindley-street, Harrow-road, claimed £14 11s. 1d., balance of an account for work and materials, from Mrs. Tremain, of 133, Sutherland-avenue, Maida Vale. The facts, according to the plaintiff's evidence, were that the defendant in March, 1914, asked him for an estimate for the repair and internal decoration of her house, commencing at the top flat. He named a figure, and that being accepted he was told to start the job. Next he was taken to the basement and the same formula observed, and next the dining-room floor. When this was completed, he inquired about the hall and main staircase, but was told that another firm had that job.

His Honour: I see you charge various rates for wallpapers?

Plaintiff: The bargain was that I was to be allowed 1s. per piece for papers, and the defendant was to choose them; if the price was over 1s. a piece she was to pay the difference as an extra.

Mr. Morris (to the plaintiff): About these glazed tiles for the kitchen?

Plaintiff: There was a certain surface of tiling estimated for, but as I had a larger quantity of tiles there than was required I was asked to leave them, and I did.

Mr. Clay (for the defendant): You have charged £3 extra for the cornice of the dining-room?

Plaintiff: The cornice was knocked down by the gasmen who came to fix stoves in every room of the house, and had to be put up again.

Mr. Clay: About the price of the paper; how was that fixed?

Plaintiff: Defendant chose the papers. You can get them from 2d. to 10s. a piece.

His Honour: That's a jump!

Generally, plaintiff said, the defendant had agreed to his prices before he started any section of the work. Defendant said that she had agreed to pay for wallpapers up to a certain price, and those used were above her figure. The £2 charged for pulling down the sink walls was a distinct overcharge, as the water came through the dining-room ceiling and loosened the cornice. For putting this up plaintiff had charged £8, and Messrs. Henwood & Roberts had replaced it for £4 6s. She gave no instructions to replace the attic floor, and knew nothing about that work being undertaken till it was finished. As to the gas, pipes were in position all through the house, and what the gasmen did had no effect on the dining-room cornice. When this accident occurred she became suspicious of plaintiff's work, and entrusted the hall and staircase to Messrs. Henwood & Roberts, who charged her £4 6s. for work for which the plaintiff had been paid £8. He had also charged her £35 for work for which she paid £14 ten years ago. In consequence of these high prices she claimed 5 per cent. deduction from the account, and produced cheques showing that plaintiff had been paid £54 of an account for £69 10s. 9d. for the whole of the work done.

His Honour, having gone through the items *seriatim*, said he would allow the 5 per cent. claimed and the £5 cheque not credited, and gave judgment for £8 1s., with costs.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi., viii.; Public Appointments, xvi.; Auction Sales, xviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

January 21.—**Wigan.**—Alterations, etc.—For proposed alterations and repairs at the Poor Law Institution, Frog-lane, Wigan, for the Guardians. Particulars of the Master of the Institution, Wigan.

January 22. — **Newark.** — Converting.—For converting premises in Middlegate into a schools clinic, for the Newark Corporation. Particulars and quantities of the Borough Engineer, Town Hall.

January 26. — **Barrow.** — Extensions. — For carrying out certain extensions to the Refuse Destructor buildings, Cavendish-street, for the Corporation. Forms of tender, etc., of the Borough Engineer.

January 26.—**Brentford.**—Alterations, etc.—For certain alterations and repairs to be carried out:—(1) At the Union Offices; (2) at Warkworth House, for the Guardians. Plans and specifications, etc., at the Union Offices, Isleworth. Mr. F. E. Harmsworth, Clerk to the Guardians.

January 29. — **East Kilbride.**—School.—For the erection of a small wooden open-air school at Hairmyres Institution, East Kilbride. Plans may be seen and copies of the specification and tender obtained at the office of Mr. W. E. Whyte, District Clerk, District Offices, Hamilton.

✱ January 29.—**Hackney.**—Shops and Stores.—Tenders are invited for six small lock-up shops and stores at Mare-street, Hackney.

January 31.—**Churwell.**—Warehouse, etc.—Erection of three-story warehouse, engine-house, engine-beds, gas-production plant, etc., at Millshaw Leather Works, Churwell, for Messrs. W. L. Ingle, Ltd. Plans and specifications of Mr. T. A. Buttery, Licentiate R.I.B.A., architect and surveyor, Queen-street, Morley.

January 31. — **Harrogate.** — Decorations. — Interior decorations at the Harlow Car Hotel and the Victoria Baths, etc., for the Corporation. Sepcification and form of tender of Mr. C. E. Rivers, A.M.Inst.C.E., Borough Engineer, Municipal Offices.

January 31.—**South Milton.**—Repairs, etc.—For repairs and alterations to farm buildings at Whitlocksworthy, S. Milton, near Kingsbridge. Specifications, etc., of Messrs. Bourne & Sons, land agents, Totnes.

February 2.—**Cardiff.**—Alterations, etc.—For the erection and construction of alterations and additions at the Cardiff Sanatorium, and additions at the Cardiff Sanatorium, Canton, Cardiff, for the Cardiff City Council. Contract drawings, specifications, etc., at the City Engineer's Offices, City Hall, Cardiff.

No Date.—**Hartest Green (Suffolk).**—House and Shop.—For the erection of a house and shop at Hartest Green, Suffolk, for Messrs. Crickmore & Savage, grocers and drapers. Plans and specifications can be seen by appointment at Mr. John Honeywood's, Hartest, Bury St. Edmunds.

No Date. — **Lochwinnoch.** — Cottages.—For single or all trades required in the erection of not less than one nor more than three cottages proposed to be erected in connection with Laigh Linthills (Lochwinnoch) small holdings scheme. The Secretary, Board of Agriculture for Scotland, 29, St. Andrew-square, Edinburgh.

FURNITURE, MATERIALS, etc.

January 29. — **Birmingham.** — Builders' Materials.—Supply to the Public Works Committee of builders' materials for one year, ending March 31, 1917. Forms of tender, etc., of the City Surveyor, Council House, Birmingham. Deposit, £1.

January 29.—**Bishop Auckland.**—Builders' Materials.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Forms of tender, etc., of the Surveyor, Town Hall Buildings.

January 29.—**Cardiff.**—Builders' Materials.—Supply to the Llandaff and Dinas Powis R.D.C. of builders' materials. Tender forms of the Surveyor, Mr. James Holden, A.M.Inst.C.E., 20, Park-place, Cardiff.

January 29.—**Surbiton.**—Builders' Materials.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Tender forms of the Surveyor to the Council, Council Offices, Ewell-road, Surbiton.

January 29.—**York.**—Builders' Materials.—Supply to the Corporation of builders' materials during the year ending March 31, 1917. Forms of tender of Mr. F. W. Spurr, City Engineer, Guildhall, York.

January 31.—**Acton.**—Builders' Materials.—Supply to the U.D.C. of builders' materials for the twelve months ending March 31, 1917. Forms of tender, etc., may be seen at the offices upon application to the Surveyor's Department.

February 7.—**Leeds.**—Cement, etc.—Supply during the twelve months ending March 31, 1917, of cement, earthenware drain-pipes, etc., sewer ironwork. Forms of tender, etc., of Mr. W. T. Lancashire, City Engineer, Municipal Buildings, Leeds.

February 7. — **Middlesbrough.** — Builders' Materials.—Supply to the Corporation of builders' materials required from April 1, 1916, to March 31, 1917. Specification, etc., of Mr. S. E. Burgess, M.Inst.C.E., Borough Engineer, Middlesbrough.

February 7. — **Pembroke.** — Builders' Materials.—Supply to the Pembroke U.D.C., County Dublin, of builders' materials during the twelve months ended March 31, 1917. Specification, etc., can be obtained at the Town Hall, Ballsbridge, Co. Dublin.

February 8.—**Deptford.**—Builders' Materials.—Supply to the B.C. of builders' materials for the year ending March 31, 1917. Forms of tender, etc., can be obtained at the Town Hall, New Cross-road, S.E., between ten and four o'clock (Saturdays, ten to twelve).

February 10.—**London.**—Builders' Materials.—Supply to the Bermondsey Guardians of builders' materials for one year, from April 1, 1916, to March 31, 1917. Forms of tender of Mr. E. Pitts Fenton, Clerk to the Guardians, No. 283, Tooley-street, S.E.

February 12. — **Ossett.** — Materials, etc. — Supply to the Corporation of materials, stores, workmen's tools, etc., required in the Highways, Gas, Lighting, Water, Sanitary, and Educational Departments for one year from April 1, 1916, to March 31, 1917. Specifications, etc., at the Borough Surveyor's Office.

No Date.—**Salford.**—Lime.—For the supply of about 500 tons of lime for the purification of gas. Particulars of Mr. William W. Woodward, Engineer, Gas Offices, Bloom-street, Salford.

ENGINEERING, IRON, AND STEEL.

January 31. — **Queensland.** — Bridgework. — For the supply to the Queensland Railway Commissioner of bridgework. Applications to the Agent-General, 409, Strand, W.C. Further particulars may be obtained at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C.

February 14. — **Birkenhead.**—Heating, etc., Plant.—For the supply, delivery, and erection at the Union Institution and Infirmary, Derby-road, Tranmere, Birkenhead, of a complete centralised heating and hot water supply plant, together with mains, connections, and accessories, for the Guardians. Forms of tender, etc., of the Consulting Engineers, Messrs. Sloan & Lloyd Barnes, M.I.Mech.E., 34, Castle-street, Liverpool. Deposit, £2 2s.

February 23.—**Johannesburg.** — Machinery, etc.—The supply or supply and erection of machinery and fittings for proposed public wash-house, Newtown, Johannesburg. Documents and drawing may be seen on application to the Council's agents in London, Messrs. E. W. Carling & Co., St. Dunstan's-buildings, St. Dunstan's-hill, E.C. Deposit of £1 1s. is required for copies.

ROAD, SANITARY, AND WATER WORKS.

January 22.—**Fermoy.**—Well.—For the sinking of a deep well at Ballinahown, Glanworth East E.D., for the Fermoy R.D.C. Specification, etc., can be seen at the office of Mr. Peter O'Neill, Clerk of the Council, Clerk's Office, Fermoy Workhouse.

January 24.—**Wangford.**—Gravel.—Supply to the R.D.C. of 80 tons of fine gravel (taken out to ¾-in. mesh), to be delivered in such quantities as may be required on or before September 30, 1916. Tender forms of Mr. S. W. Rix, Clerk, Beccles.

January 25. — **Birmingham.** — Road Reconstruction.—Reconstruction of a portion of Brookhill-road, Alum Rock, for the Public Works Committee. Drawings, etc., of Mr. Henry E. Stilgoe, M.Inst.C.E., City Engineer and Surveyor, the Council House, Birmingham. Deposit, £2.

January 29.—**Bridgwater.**—Stone.—Supply to the R.D.C. of stone for the roads within the above district for one year from April 1, 1916, to March 31, 1917. Forms of tender, etc., of the Council's Surveyor, Mr. W. H. Cousins, Surveyor's Office, Eastover, Bridgwater, or of Mr. T. M. Reed, Clerk to the Council, Bridgwater.

January 31.—**Beddington and Wallington.**—Tar Spraying.—For the tar spraying only of about 180,000 sq. yds. of the roads within their district, for the U.D.C. Form of tender, etc., of Mr. S. F. R. Carter, A.M.Inst.C.E., Engineer and Surveyor to the Council, Council Offices, Wallington, Surrey.

✱ January 31. — **Southwark.** — Alterations to Sanitary Fittings.—The Southwark Guardians invite tenders for alterations to sanitary fittings.

February 7.—**Northumberland.**—Stone.—Fo supplying, breaking, and carting stone required for the maintenance of the county roads during the year from April 1, 1916, to March 31, 1917 for the C.C. Forms of tender, etc., of the County Surveyor, Moothall, Newcastle-on-Tyne.

February 9. — **Mullingar.**—Sewer, etc.—Fo construction of a sewer and necessary connection thereto, at the Mullingar District Lunati Asylum. Drawings and specifications prepare by Messrs. Doyle & Loughlin, Civil Engineers Church-street, Athlone, can be seen at thei offices, or at the office of Mr. L. Gavin, Residen Medical Superintendent, Boardroom, Mullinga Asylum.

Auction Sale.

✱ January 25.—**City-road, E.C.**—Mr. F. G Bowen will sell by auction, on the premises, th plant, machinery, and stock of a builder an contractor.

[Those with an asterisk (*) are advertised in this issue.]

ICES CURRENT OF MATERIALS.

wing to the exceptional circumstances which vail at the present time, prices of materials uld be confirmed by inquiry.]

e our last issue lead prices have been reduced.—ED.

Our aim in this list is to give, as far as possible, the rage prices of materials, not necessarily the highest owest. Quality and quantity obviously affect prices fact which should be remembered by those who e use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
t Stocks	2	0	0
ked Stocks for Facings	2	15	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
tons	1	16	0	BestBluePressed Staffordshire	3	15	0
t Fareham ed	3	12	0	Do. Bullnose	4	0	0
tRedPressed uabon Facing	5	0	0	Best Stourbridge Fire Bricks	4	0	0

ZED BRICKS—

	£	s.	d.		£	s.	d.
st White, vory, and alt Glazed tretchers	13	0	0	D'ble Str'tch'rs	18	10	0
ders	12	10	0	Double Headers	15	10	0
ins, Bullnose nd 4½ in. lats	16	10	0	One Side and two Ends	19	10	0
				Two Sides and one End	20	10	0
				Splays and Squints	18	0	0

Second Quality £1 per 1000 less than best.

	s.	d.	
mes and Pit Sand	8	0	per yard, delivered.
mes Ballast	6	9	„ „ „

Per ton, delivered.

	£	s.	d.	£	s.	d.
t Portland Cement	2	5	0	2	8	0
t Ground Blue Lias Lime	1	1	0	—		

o. £2 1s. alongside in 80-ton lots.

rocrete 2s. 6d. per ton extra on above.

E.—The cement or lime is exclusive of the ordinary charge for sacks.

y Stone Lime .... 17s. 0d. per yard delivered.

rbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
H STONE—delivered in railway trucks at estbourne Park, Paddington, G.W.R., or outh Lambeth, G.W.R., per ft. cube	1	7
do. delivered in Railway trucks at Nine lms, L. & S.W.R., per ft. cube	1	8¾
do. delivered on road waggons, Nine Elms epôt	1	9¼

TLAND STONE—

	s.	d.
rown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, L. & S.W.R., per ft. cube	2	5½
o. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½

hite Basebed. 2d. per ft. cube extra.

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
aster in blocks	1	11	Red Corsehill in blocks	2	6
r in blocks	1	7	Closeburn Red Freestone	2	2
enshill in blocks	2	0	Red Mansfield Freestone	2	6
ley Dale in locks	2	6			

RK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
ppled random blocks	2	10
Per Ft. Super., Delivered at Railway Depôt.		
n. sawn two sides landings to sizes (under 0 ft. super.)	2	8
n. rubbed two sides ditto, ditto	3	2
in. sawn two sides slabs (random sizes)	1	0
n. to 2½ in. sawn one side slabs (random sizes)	0	8
n. to 2 in. ditto, ditto	0	6½

RD YORK—

Per Ft. Cube. Delivered at Railway Depôt.	s.	d.
ppled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
. sawn two sides landing to sizes (under 40 ft. uper.)	2	9
. rubbed two sides ditto	3	3
. sawn two sides slabs (random sizes)	1	2½
. self-faced random flags	0	6

TILES.

Per 1000 f.o.r. London.

	£	s.	d.
t machine-made tiles or hand-made sand-aced tiles from either Broseley or taffordshire district	2	12	6
amental ditto	2	15	0
and valley tiles (per dozen)	0	5	6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£	s.	d.
t Blue Bangor slates, 20 by 10	11	16	0
t quality „ „	11	10	0
„ „ 16 by 8	5	15	0
t Blue Portmadoc, 20 by 10	11	13	6
t quality „ „	11	3	6
„ „ 16 by 8	5	15	0

WOOD.

T BUILDING REDWOOD.

Imported sizes.	£	s.	d.	£	s.	d.
ls: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	25	0	0	26	0	0
in. by 9 in., 2½ in. by 9 in. and 2 in. by 9 in.	24	0	0	25	0	0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	£	s.	d.	£	s.	d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	22	10	0	23	10	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.		
¾ in.	1	0	0			
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.		

Best Middling Dantzic and Memel Fir Timber Logs	Per load of 50 ft. cube.					
(average specification)	8	10	0	—		
Seconds do. do.	8	0	0	—		
9 in. to 10 in. do.	7	0	0	—		
6 in. to 8 in. do.	6	10	0	—		

Stocks very limited.

	Per load.					
Sawn pitch pine logs (about 35 cu. ft. average)	9	0	0	9	10	0
Do. 6 in. to 10 in.	7	0	0	7	5	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	10	0	7	0	0

	Per standard.					
Best Pitch Pine Deals	34	0	0	35	0	0
Rio do.	23	0	0	25	0	0
Under 2 in. thick	0	10	0	extra.		

JOINERS' WOOD.

White Sea First Quality Red:	£	s.	d.	£	s.	d.
4 in. by 11 in.	35	0	0	36	0	0
3 in. by 11 in., and 2 in. by 11 in.	34	0	0	35	0	0
4 in. by 9 in.	33	0	0	34	0	0
3 in. by 9 in., and 2½ in. by 9 in.	32	0	0	33	0	0
9 in. by 11 in. boards	1	0	0	more than deals.		
7 in. and 8 in. battens	24	0	0	25	0	0
7 in. and 8 in. boards	1	0	0	more than battens.		
Seconds quality	2	0	0	less than best.		
Third quality	£2 to £3			less than seconds.		
Archangel White Deals—						
Best 3 in. by 11 in.	28	0	0	29	0	0
3 in. by 9 in. and 10 in.	26	0	0	27	0	0
Seconds, do.	1	10	0	less than best.		
U.S. Battens	19	10	0	20	0	0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.					
1¼ in. by 7 in. planed and shot	1	5	6	1	10	0
1¼ in. by 7 in. planed and matched	1	6	0	1	10	0
1 in. by 7 in. planed and shot	1	0	0	1	3	0
1 in. by 7 in. planed and matched	1	1	0	1	4	6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0	16	0	0	17	6
1 in. by 7 in. do.	1	1	0	1	3	6
⅝ in. by 7 in. do.	0	13	0	0	14	0

6 in. at 6d. per square less than 7 in.

5 in. and 5½ in. at 6d. per square less than 6 in.

	Per standard.					
Columbian or Oregon Pine, best quality	35	0	0	40	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.		
Oddments	39	0	0	„		
Seconds, regular sizes	43	10	0	„		
Oddments	37	10	0	„		
Kauri Pine—Planks per ft. cube	0	7	6	—		
Oak Logs—						
Large, per ft. cube	0	6	0	0	6	6
Small „ „	0	5	0	0	5	6
Wainscot Oak Logs, per ft. cube	0	10	6	0	12	6
Dry Wainscot Oak, per ft. super, as inch	0	1	0	0	1	3
¾ in. do. do.	0	0	10	0	1	0
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0	1	0	0	1	4
Selected, Figury, per ft. super, as inch	0	1	6	0	2	6
Cuba Mahogany	0	1	6	0	2	6
Dry Walnut, American, per super, as inch	0	1	0	upwards. 0	1	3
French, "Italian," Walnut	0	1	0	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	34	0	0
Do. do. (Java)	25	0	0	27	0	0
American Whitewood planks, per ft. cube	0	6	6	0	7	6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton.					
	£	s.	d.	£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	5	0	21	5	0
Plain Compound Girders, ordinary Sections	22	0	0	23	0	0
Plain Compound Stanchions	23	0	0	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	21	10	0
Flitch Plates	20	10	0	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	14	0	0

(Turning extra.)

METALS (*Continued*).

	Per ton, in London.					
IRON—	£	s.	d.	£	s.	d.
Common Bars	16	0	0	—		
Staffordshire Crown Bars, good merchant quality	16	10	0	17	0	0
Staffordshire "Marked Bars"	17	0	0	17	10	0
Mild Steel Bars	16	10	0	17	0	0
Steel Bars, Ferro-Concrete quality, £17 10s. basis price.						
Hoop Iron, basis price	17	10	0	—		
„ „ Galvanised	30	0	0	35	0	0
(*And upwards, according to size and gauge.)						
Sheet Iron Black—						
Ordinary sizes to 20 g.	18	0	0	—		
„ „ 24 g.	19	0	0	—		
„ „ 26 g.	20	0	0	—		
Sheet Iron, Galvanised flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29	0	0	—		
Ordinary sizes to 22 g. and 24 g.	29	10	0	—		
Ordinary sizes to 26 g.	32	0	0	—		
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	30	0	0	—		
„ „ 22 g. and 24 g.	30	10	0	—		
Ordinary sizes to 26 g.	33	10	0	—		
Galvanised Corrugated Sheets—						
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28	0	0	—		
Ordinary sizes, 22 g. & 24 g.	28	10	0	—		
Ordinary sizes, 26 g.	29	0	0	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19	15	0	—		
Best Soft Steel Sheets, 22 g. & 24 g.	20	0	0	—		
Best Soft Steel Sheets, 26 g.	21	15	0	—		
Cut Nails, 3 in. to 6 in.	18	10	0	19	0	0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

	£	s.	d.			
LEAD—Sheet, English, 4 lb. and up	36	10	0	—		
Pipe in coils	37	0	0	—		
Soil pipe	40	0	0	—		
Compo pipe	40	0	0	—		

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.	
COPPER—					
Strong Sheet	per lb.	0	1	5	—
Thin „	„	0	1	6	—
Copper nails	„	0	1	5	—
Copper wire	„	0	1	5	—
BRASS—					
Strong Sheet	„	0	1	3	—
Thin	„	0	1	4	—
TIN—English Ingots	„	0	1	10	—
SOLDER—Plumbers'	„	0	0	10	—
Tinmen's	„	0	1	0	—
Blowpipe	„	0	1	2	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	„ fourths	7½d.
„ fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	„ 21 oz.	6¾d.
„ fourths	6¼d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6¼d.
Rolled Sheet	4d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	9
„ „ „ in barrels	„	0	3	10
„ „ „ in drums	„	0	4	1
Boiled „ „ in barrels	„	0	4	0
„ „ „ in drums	„	0	4	4
Turpentine in barrels	„	0	4	5
„ in drums	„	0	4	8
Genuine Ground English White Lead,	per ton	45	15	0
(In not less than 5 cwt. casks.)				
Red Lead, Dry	per ton	42	10	0
Best Linseed Oil Putty	per cwt.	0	11	0
Stockholm Tar	per barrel	1	12	0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	56	15	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

PATENTS.

APPLICATIONS PUBLISHED.*

18,831 of 1914.—Jacques Quost: Moulds mainly applicable for building chimneys of reinforced concrete.

22,404 of 1914.—Hugo Victor Flinn: Coal shutes for delivering coal to boiler furnaces and like purposes.

22,845 of 1914.—Thomas Potter: Glazing bars for glass roofs and other purposes.

23,976 of 1914.—William John Bowtell: Luffing cranes.

24,087 of 1914.—Percy Frederick Bunyard: System of construction for use in the erection of framed structures.

24,103 of 1914.—Robert Affleck: Portable buildings.

24,164 of 1914.—Andrew Logan Neeson: Indiarubber and the like stair treads and mats.

24,471 of 1914.—Stuart Arthur Hogg: Implement for subsoiling or loosening and aerating the subsoil.

24,693 of 1914.—Arthur Graham France: Fastening devices for doors, casements, and the like.

3,241 of 1915.—Richard Thomas Grocott: Ceiling-roses and the like electrical accessories.

4,574 of 1915.—Charles Showell: Emergency exit door fastenings.

5,311 of 1915.—Thomas Henry Marten: Cranes.

5,996 of 1915.—Samuel Rowland Parkes: Cases for sash pulleys, locks, or the like, and the manufacture of the same.

6,304 of 1915.—Locomotive Superheater Company: Method of making pipe bends.

8,449 of 1915.—Eugène François Giraud: Electric rivet-heaters, welders, and the like.

8,551 of 1915.—Julius Gresly: Manufacture of hydraulic cement.

8,889 of 1915.—Georg Stolle and Alfred Hocks: Case-hardening and other surface treatment of iron and steel articles.

8,986 of 1915.—Walter Grafton: Gas fires.

9,231 of 1915.—Frederick Henry Royce and Rolls-Royce, Ltd.: Joints for link-work.

10,100 of 1915.—Lucie Dreyfus (*née* Lipman): Panels for doors, walls, and the like.

11,801 of 1915.—Charles Rees Williams: Grease trap.

12,049 of 1915.—George Russell Wright: Device for the extension of ordinary ladders.

12,068 of 1915.—Fletcher, Russell, & Co., Ltd. and Walter Banks: Gas fires.

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* Denotes *accepted.* † Denotes *provisionally accepted.*

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J. Bowler & Co., Ltd., Bath*	33	10

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J. T. Williams‡	£289	10

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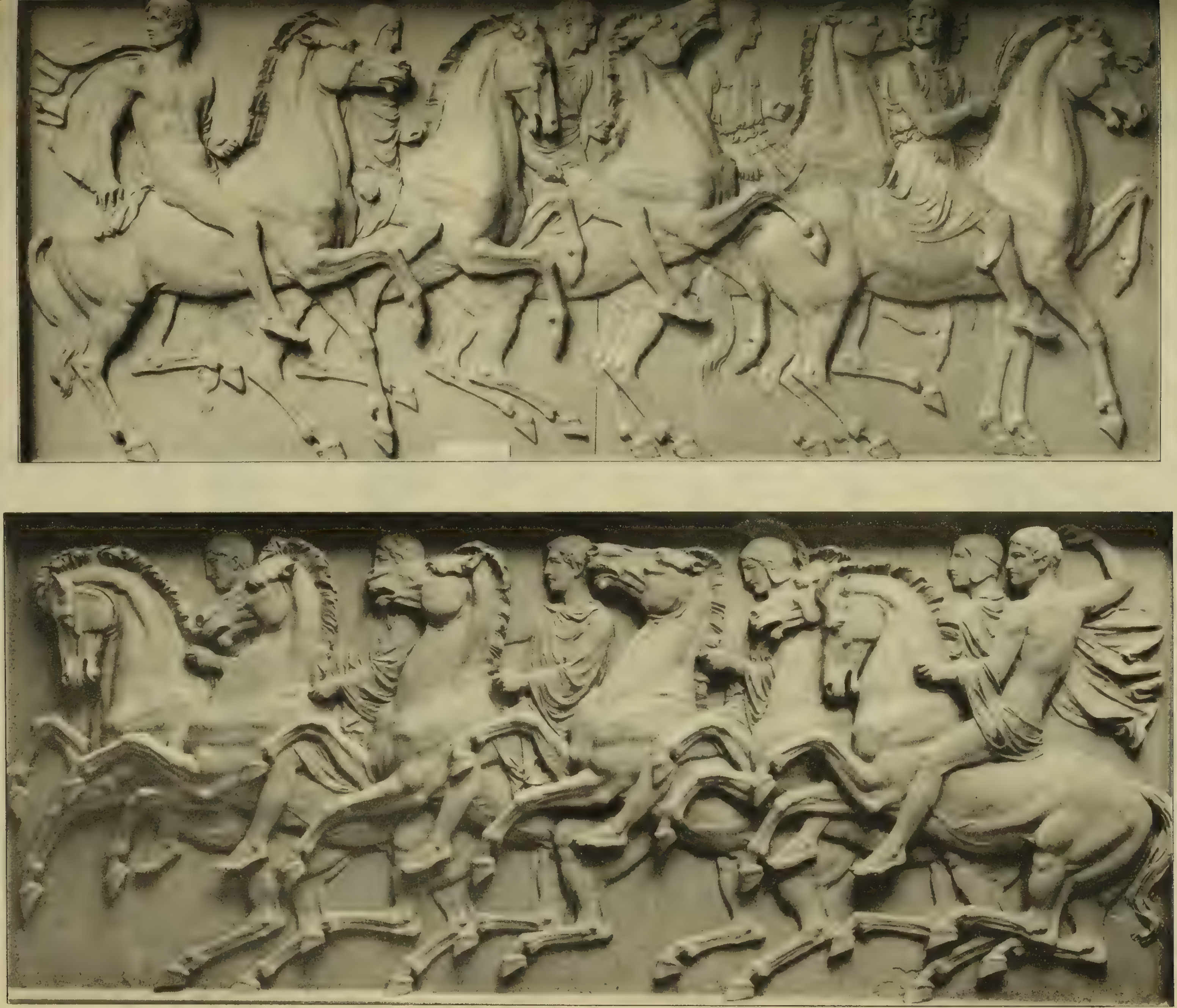

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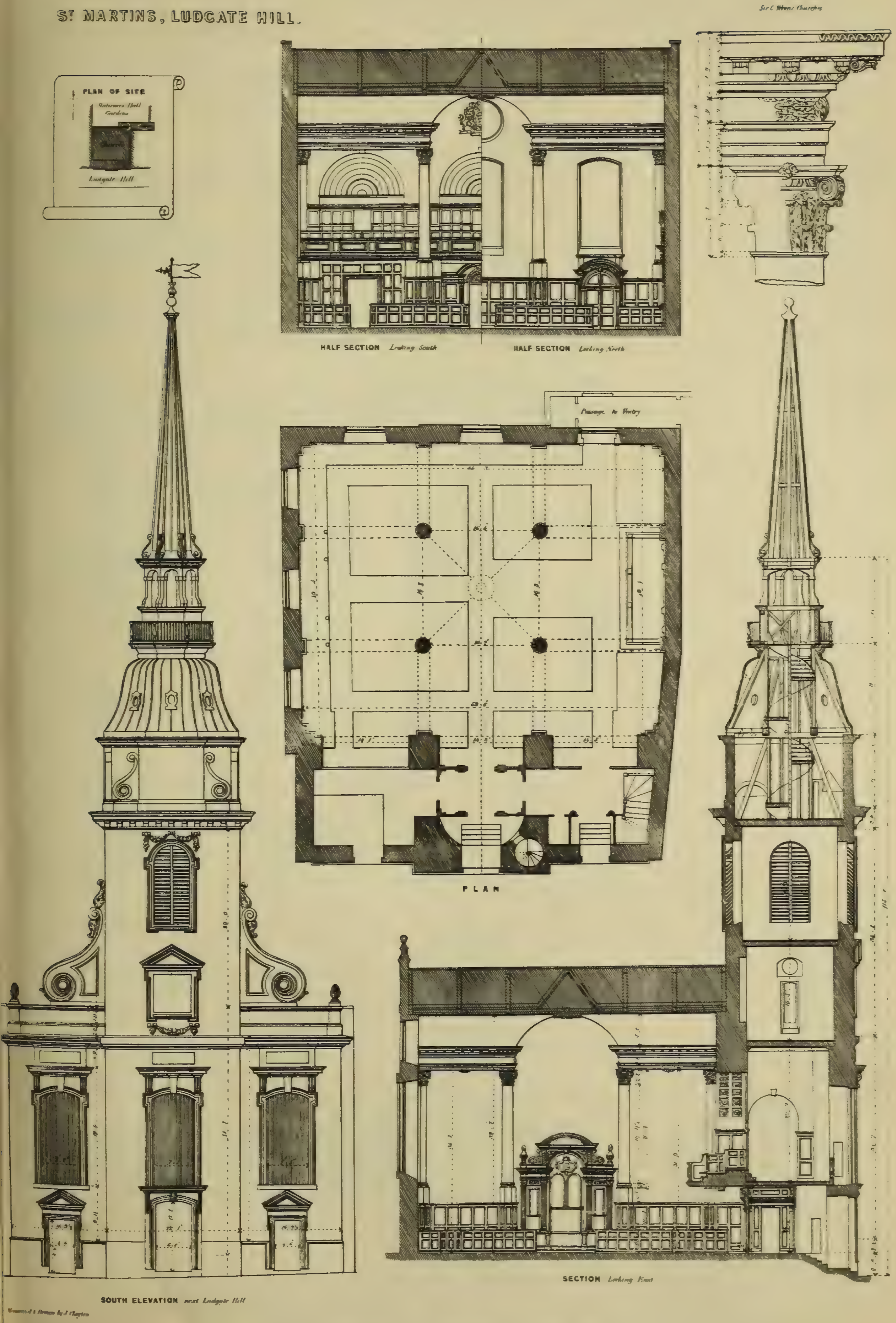


HALF SECTION *Looking South*

HALF SECTION *Looking North*

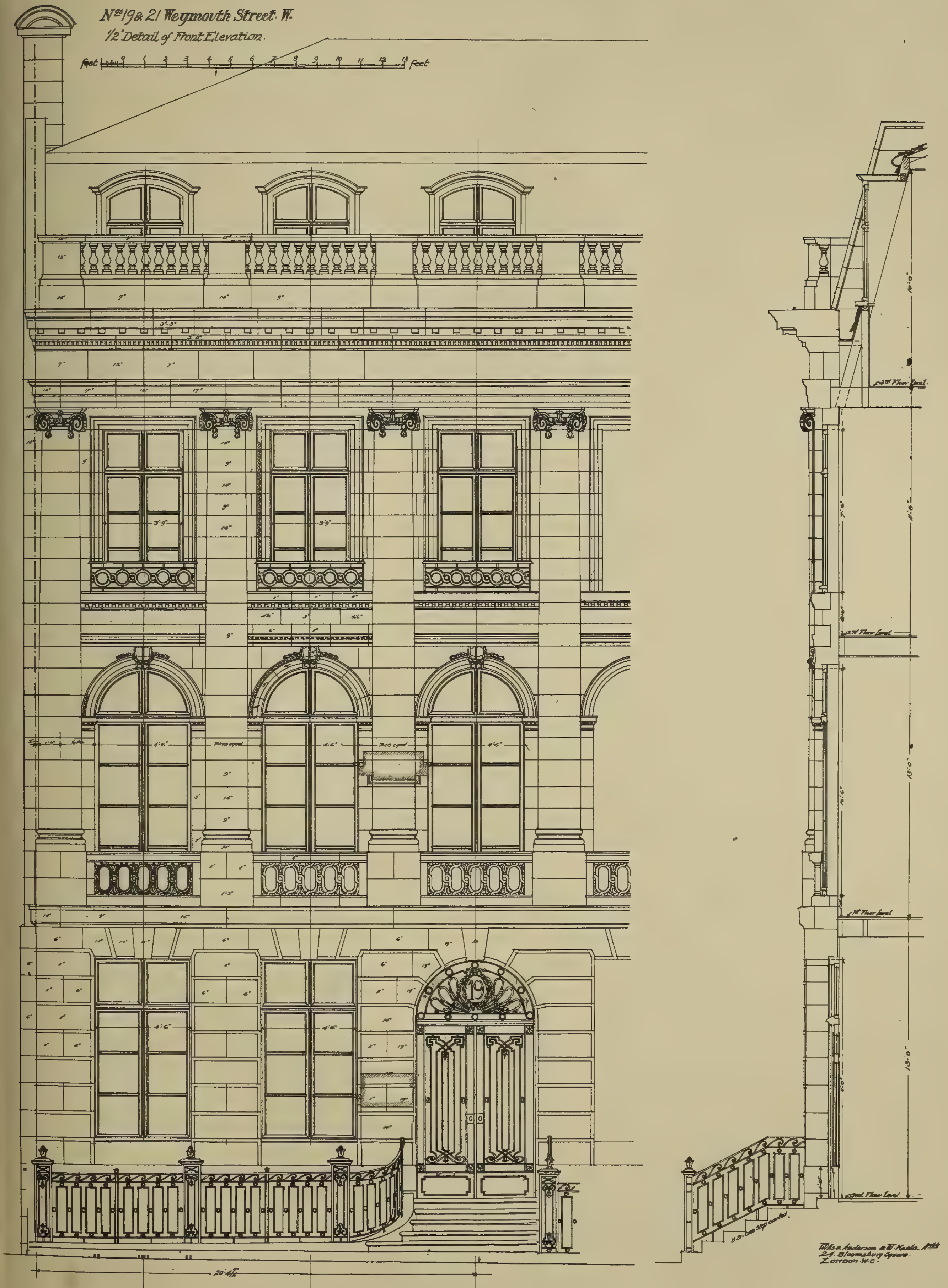
PLAN

SOUTH ELEVATION *next Ludgate Hill*

SECTION *Looking East*

Measured & Drawn by J Clayton

WREN'S CHURCHES: ST. MARTIN'S, LUDGATE HILL.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½" Detail of Front Elevation.
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2nd Floor Level
1st Floor Level
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20'-4½"
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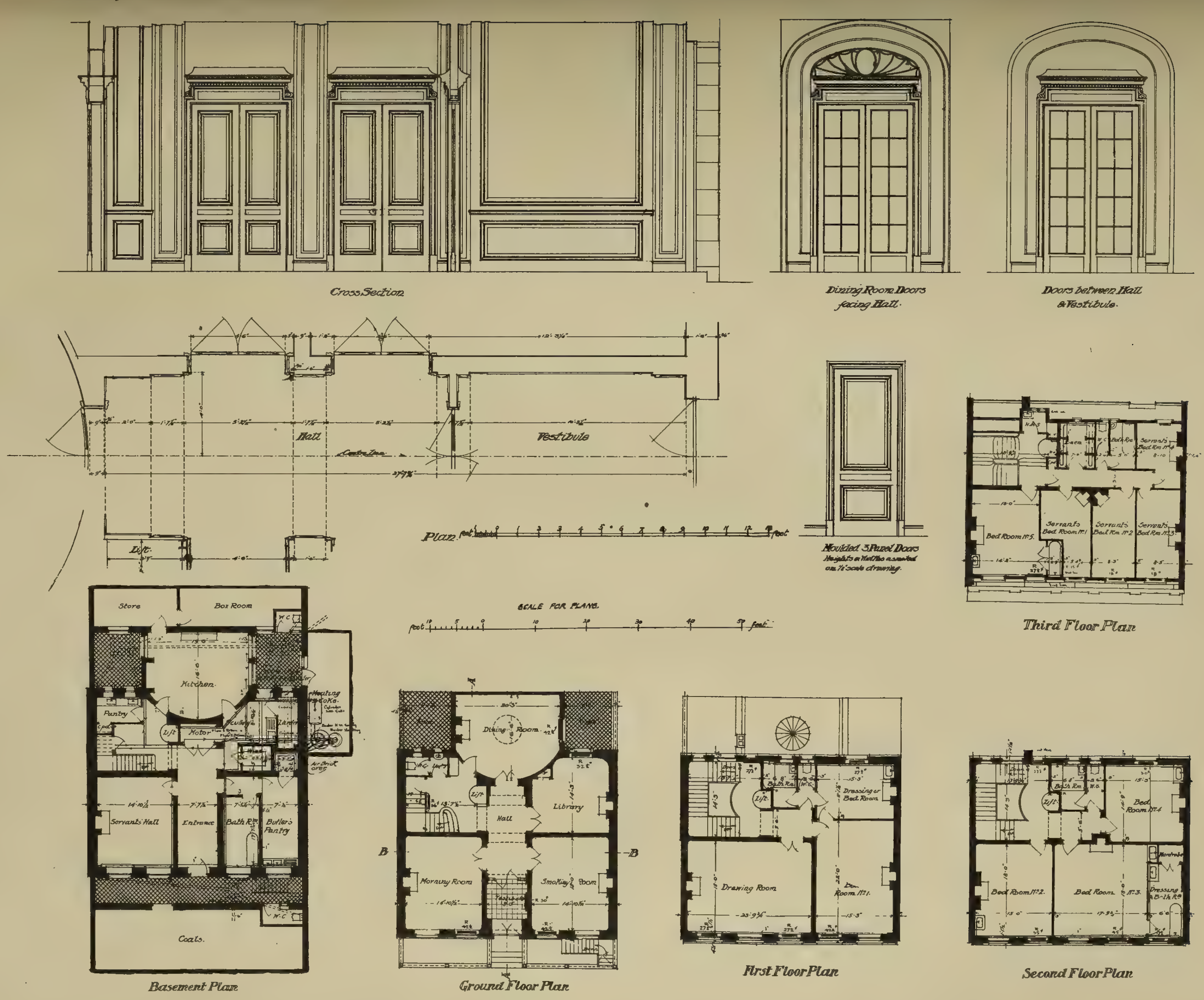

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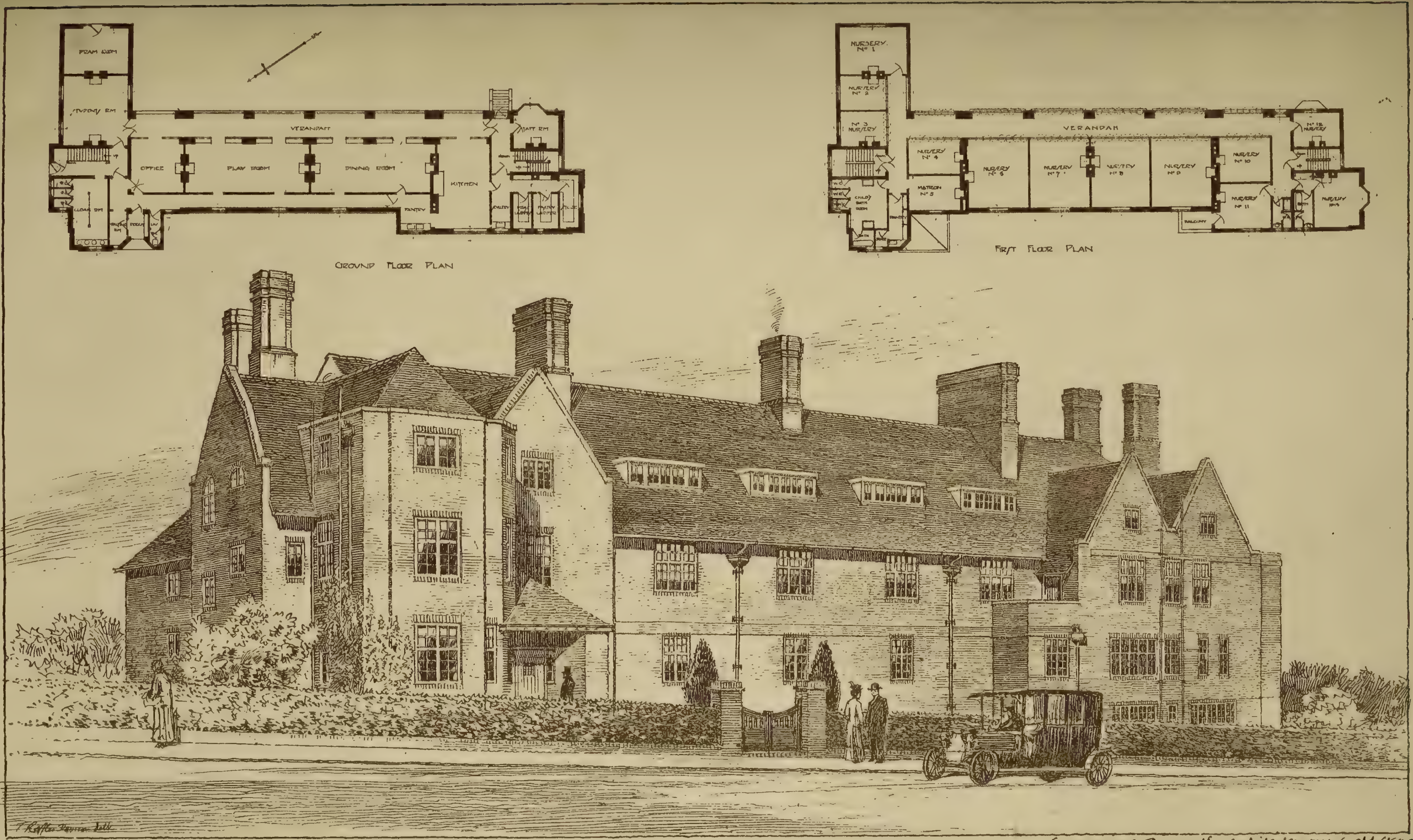

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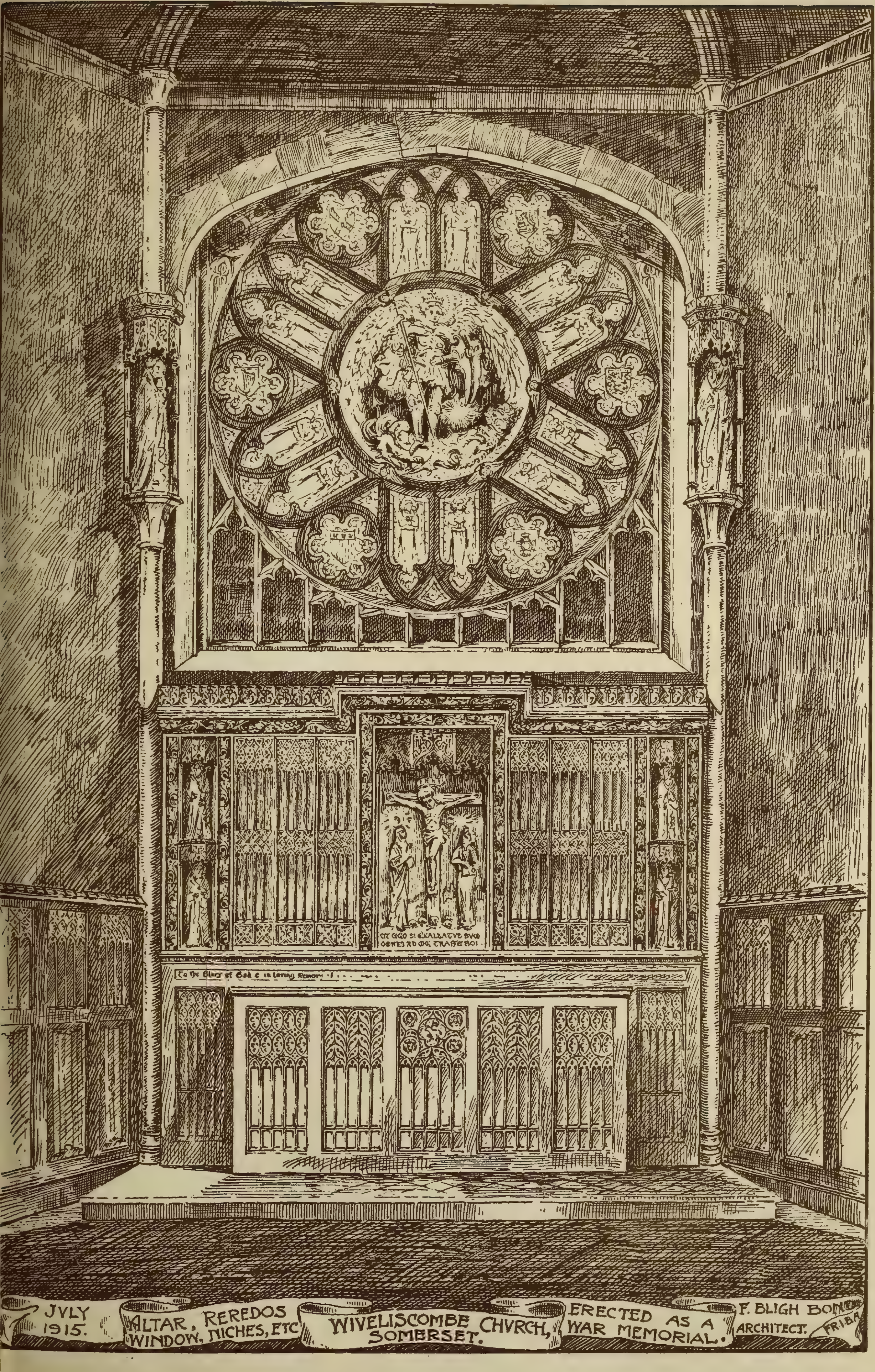
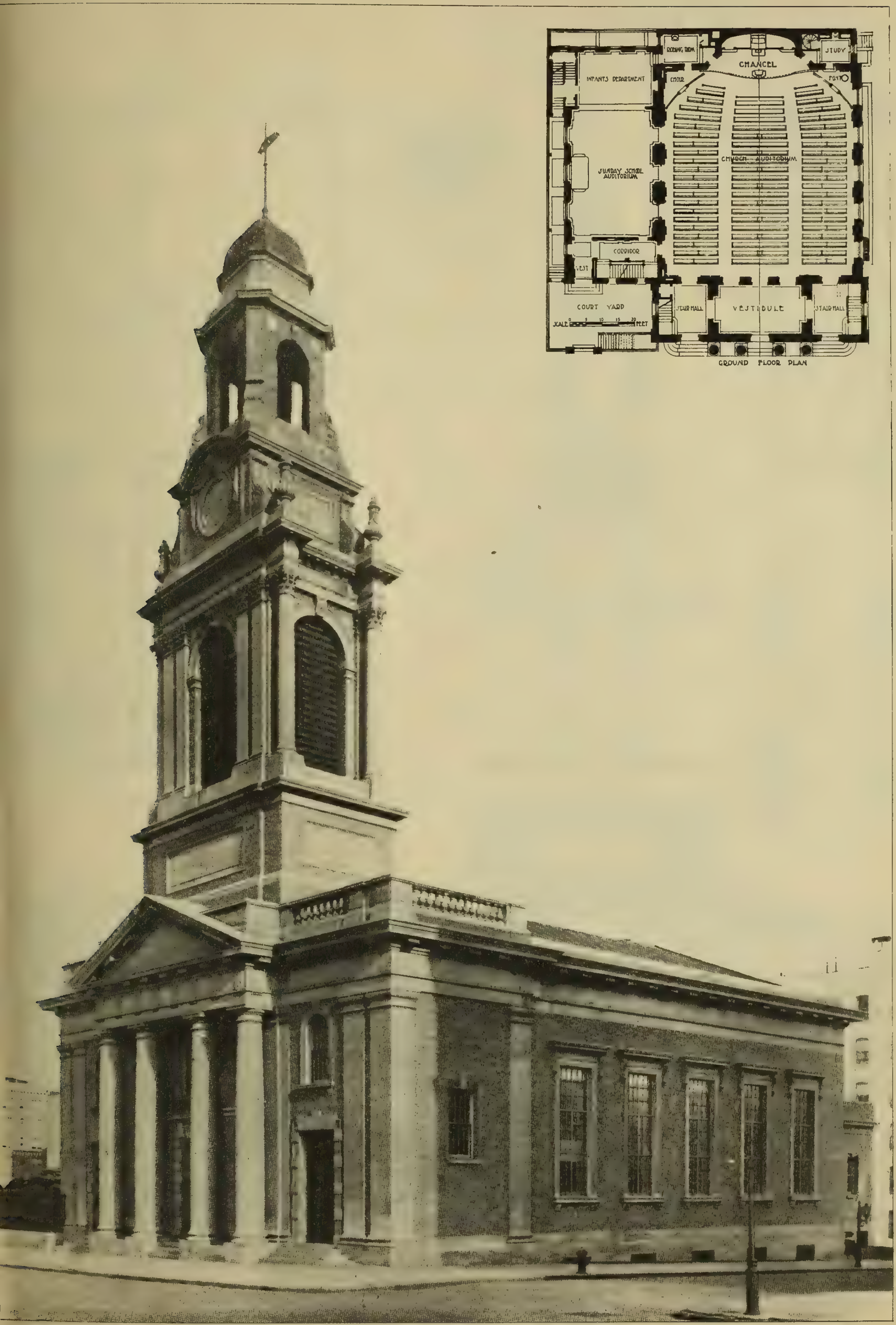

ET EGO SI EXALTATVS SVO
OMNES AD ME TRAHE BOI
To the Glory of God & in loving Memory of

JVLY 1915. ALTAR, REREDOS WINDOW, NICHES, ETC. WIVELISCOMBE CHVRCH, SOMERSET. ERECTED AS A WAR MEMORIAL. F. BLIGH BOND ARCHITECT. F.R.I.B.A.



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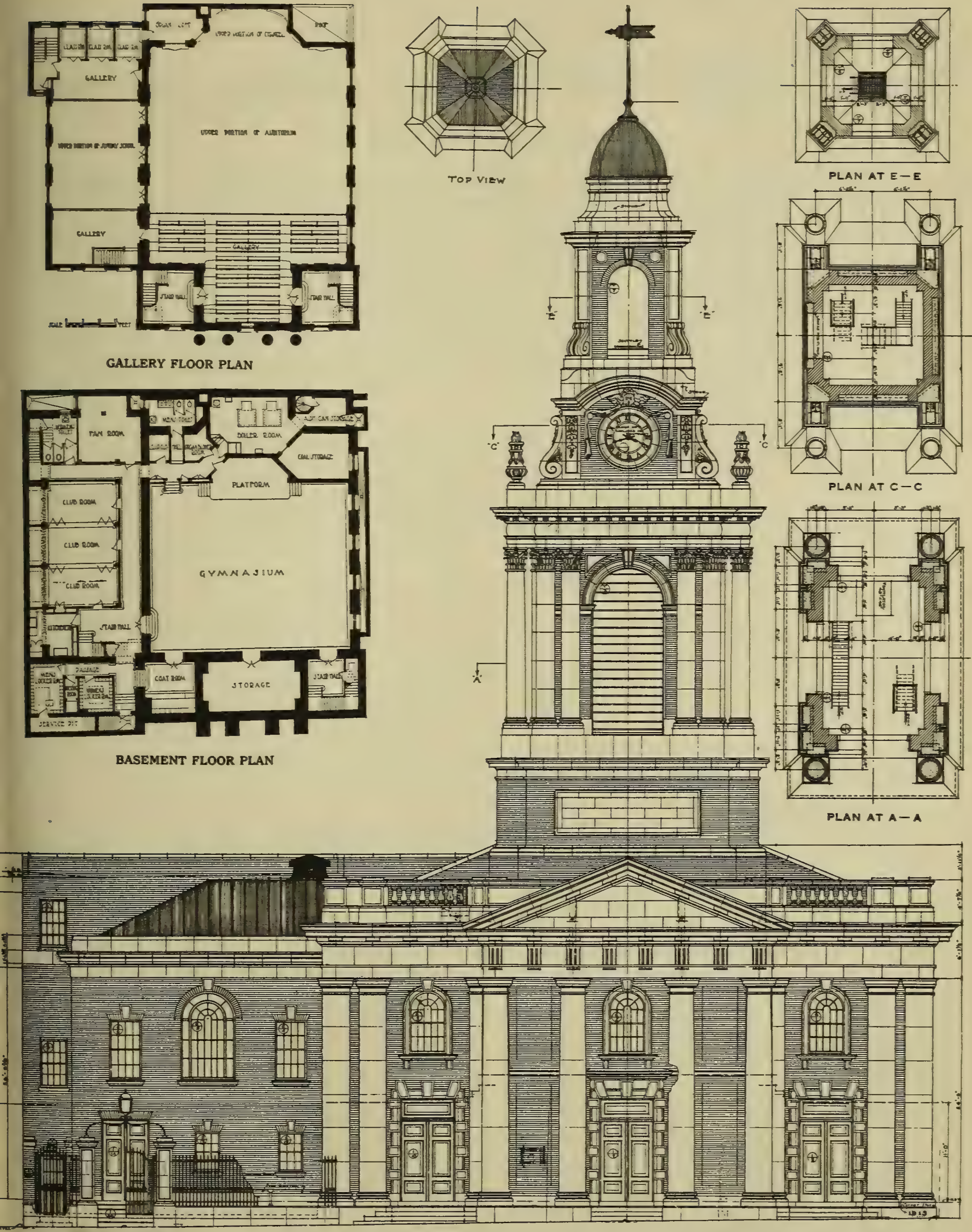

GALLERY FLOOR PLAN

BASEMENT FLOOR PLAN

TOP VIEW

PLAN AT E — E

PLAN AT C — C

PLAN AT A — A

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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3808. JANUARY 28, 1916.

THE MONUMENTS OF OUR PROVINCIAL TOWNS:

I.—LIVERPOOL—*(continued).*

LEAVING St. John's Gardens and proceeding up London-road, the monument to George III. is seen placed upon an excellent site. London-road branches into two parts here, leaving a triangular space of green in the centre. At the front of this is placed the monument. The base is surrounded by a flower-bed set in a piece of lawn, often in very bad condition, but, at any rate, in existence. Unfortunately it is deemed necessary to place an ugly railing around the whole of this and also to construct the entrance to a public convenience behind. It is much to be deplored that so many of the monuments in different parts of the country are defaced in this manner.

The statue itself, erected in 1810, is of the Greek type which prevailed at the time, with a plain severe pedestal of granite crowned by an echinus mould of large projection. The horse has little action, and the absence of trappings gives it a somewhat bare and cold appearance. The statue of George III. is likewise commonplace. Although the horse is well proportioned to the pedestal, the general impression given is one of smallness of scale, and shows how important it is to have actual bulk when dealing with equestrian groups.

Other old statues, which do not need more than passing comment, are the Huskisson statue outside the Custom House and Hugh Stowell Brown in Myrtle-street.

The former is a bronze statue upon a plain die almost devoid of mouldings. The position of this group is its best feature, and the contrast given by the columns of the portico behind shows how excellent such a placing is, giving distinction to the most commonplace sculpture. Hugh Stowell Brown is a marble statue upon a Hopton Wood stone base. It is a representation of a typical Nonconformist minister of the nineteenth century, arrayed in a frock-coat and treated in a manner quite devoid of interest or spirit. The sculptor was F. S. Williamson and the date 1889.

Next might be considered the monument to Nelson by Westmacott on Exchange flags. The base of this group is a really excellent piece of composition, the fine swing of the circle below being steadied by the grouping of the four chained slaves of the centre part and the rich bronze bas-relief panels between. The design has all the attraction of originality, and the interest is well maintained by the detail of the sculpture upon the lower part. Even the inscription adds to the richness of the whole. The lettering of the famous Admiral's command can be seen around the top, and seems designed in beautiful sympathy with the general scheme. The only element of weakness is perhaps the allegorical group of the death and translation of Nelson. Falling figures such as this are always unsatisfactory, but, although the problem of creating a group to crown so large a mass was not easy of solution, it should not have been insurmountable. Altogether this monument possesses a degree of vigour and interest quite unexpected and unusual for this period, and should be accorded high appreciation.

If previously any man has contented himself with the assurance that English sculpture and monumental design have been steadily improving for the last fifty years, he should walk from this monument about one hundred yards down the thoroughfare immediately opposite to the Queen Victoria Memorial in Lord-street. This is a scheme for any feature of which it is difficult to find a word of praise. A high steep flight of steps leads up from the island paving to a platform from which rises a canopy upon four groups of Ionic columns. Beneath this canopy is placed the figure of Queen Victoria, standing. The steps are divided into four sections by means of curved balustrades and walls, with a bronze group in the centre of each. The whole of the architectural portion of the scheme is bad. The steps look heavy and uncomfortable, the vases which crown the balustrade are most unshapely, and the whole of the canopy can be brought under the same ban. If, as is sometimes the case, this were relieved by really good modelling, some pleasure at least could have been gained from its contemplation, but the modelling is unfortunately very little above the level of the architecture. The Queen looks a coarse, heavy figure, totally devoid of majesty or regal suggestion. The symbolic groups—there is nothing, by the way, to say of what they are symbolic—are certainly better, but even they are not upon a high level. The best is illustrated in the photograph.

This monument is the more to be regretted because the site is more than reasonably good for an old city already fully built upon. It is in the centre of the town in a wide open space, the roads upon two sides rising towards it at a steep gradient, giving it the immense advantage of a commanding situation. Nor has money been stinted, for, although it has so many faults, parsimony is not one of them. Not only is there much work above ground, but a large and weighty structure such as this requires an expensive foundation, and in Liverpool, although a great deal is rock, the foundation is not always of the best. Altogether the Queen Victoria Memorial as a work of art, an example of modern sculpture, is most deplorable.

It is a pleasure to turn from this to Sir George Frampton's very beautiful little group erected to the memory of Sir Alfred Lewis Jones, and erected facing the River Mersey. No doubt there was adequate reason, but it seems somewhat curious that the site—which is a small open space laid out with grass plots—should have the portion allotted to the statue upon one side. The lay-out seems hardly large enough to contemplate the erection of three monuments, and, if that were so, the centre one, to form them into a scheme, ought to be large enough to dominate the other two. Another monument the size of this, and a much larger group, all in the compass of a hundred yards or a little more, is practically an impossibility. As the scheme stands at present the placing has a most one-sided appearance. The monument itself, however, is quite an excellent piece of design, particularly in respect to the way in which the bronzework is connected to the masonry. The quasi-Gothic feeling of the crowning figure is very characteristic of the sculptor, and is here also in good relation to the type of architecture adopted. The detail of all three figures is extremely interesting, and they portray very well the subjects they are intended to represent. The near figure is called " Research " and the far one " Fruits of Industry." The crowning figure represents " Enterprise," and there is a ship at the back which may be coupled with this in its interpretation.

Sefton Park is famed as one of the fine open spaces of the Liverpool people, and in it has been found a site for a monument to William Rathbone. In the centre of the park there is a large lake, long rather than broad in shape, and winding in its length. Near the centre of this is a large promontory of land rising steeply from the water to a considerable height. Upon this promontory is placed the statue. From the waterside a

NATIONALITY AND ARCHITECTURE.

EMERSON says of art that "it is Nature passed through the alembic of man." It is varied according to the nationality and temperament of the artist; he assimilates most readily those phases of nature which are most in accordance with his own idiosyncrasy, so that art is as varied as the different temperaments of the artists, and this assimilation or selection is not wholly due to intellectual effort, but is, in part, involuntary. The variation in art due to the differing personalities of the artists is naturally more readily to be seen in the imitative arts of painting and sculpture than they are in the ideal and more impersonal art of architecture; but even in architecture they are, as a rule, plainly visible. If we examine the architecture of any period of the past we shall find that the social, political, and physical agencies seem always exactly in accord with the æsthetic feeling and power of the artists of the time, and even with the materials in which they worked. It is the extraordinary harmony that exists between the history of men and the history of stones that causes architectural remains to be of such supreme importance to us in our study of ancient civilisations, as they express the qualities of mind that produced them. To properly appreciate any architecture we must have knowledge of the spirit that produced it. Greek architecture is the visible expression of the wonderful Greek spirit of "intellectual lucidity which was the inspiration of Greek life." And how well Roman architecture expresses the greatness of the Romans, particularly as organisers and administrators! Of this classic spirit, which had such splendid results, Kenyon Cox says:—"The classic spirit is the disinterested search for perfection; it is the love of clearness and reasonableness and self-control; it is, above all, the love of permanence and continuity." It has been said that the short age of Pericles and the fifteenth and sixteenth centuries in Italy were the most fruitful for art in the history of the world. If we wish to understand the richness of Italian art we must know something of the fullness of Italian life that produced it. As architects we realise that it is not by slavish copying of great buildings that we can produce fine architecture, and that even knowledge of the life of which it is the expression is insufficient for our purpose; we must also realise to the best of our ability the underlying movements, the ideals and aspirations that animate the men and women around us. We have to endeavour to meet a demand that never confronted the builders of the past. Matthew Arnold has said that, "Though in many respects the ancients are far above us, there is something which we demand that they can never give." Our essential characteristics as a nation are said by Matthew Arnold, in his "Essays in Criticism," to be energy and honesty, and he proves that they are most important and fruitful qualities not only in the moral sphere but also in the intellectual and spiritual sphere; "and what that energy, which is the life of genius, above everything else demands and insists upon is freedom; entire independence of all authority, prescription, and routine—the fullest room to expand as it will. Therefore a nation whose chief spiritual characteristic is energy will not be very apt to set up in intellectual matters a fixed standard, an authority, like an academy." This want of a standard authority has been a great loss to us, not only in literature, but particularly as regards our monumental architecture, and it is to a great extent because the French have such an authority that their public buildings are, as a rule, so superior to our own. It is no wonder that, possessing the above characteristics, our domestic architecture is so much superior to our public buildings. An amount of individuality that, if expressed in the design of a public building, would be detrimental to its success, is not only permissible but even desirable in the case of domestic work, and the modern domestic architecture of our country is admitted to be excelled by none. As regards our architecture generally, the futility of disorganised individual effort has at last been realised, and in recent years the technique of the art, in its widest sense, has received a study such as had not been given to it since the days of Cockerell. In public buildings especially the personality of the designer should never be aggressive nor the dominant note; that should be given by the personality of the building. The subordination of the individual for the general good of the community is one of the most characteristic tendencies of the present time; we see this in the recognition of the value of organisation in building development, and in the importance now attached to the study of town planning, which implies the suppression of rampant individualism for certain general amenities, and a readiness to consider each other's work. The Englishman will spend money with pleasure on his own house, and with satisfaction on his business premises, but grudgingly on a public building, and will use every argument to reduce its size or its splendour; and this attitude, he says, is due to his dislike for show, but in many cases it would be more correctly ascribed to his stolid insensibility to art. The Frenchman, on the other hand, is a cheerful giver because, as a rule, he takes great interest and pride in his public monuments. There are, however, many signs of a hopeful change in our national taste, and the people generally are taking a growing interest in our architecture, and are also beginning to realise the fact that beauty in towns is in the long run both profitable and economical.

Easy communication suppresses more and more not only local but national characteristics. What, then, of the architecture of the future? Those most competent to form an opinion seem to agree that it will become more uniform over the whole of the civilised world. In this connection we may quote Jean Louis Pascal:—

"The time has passed when contemporary civilisations ignore even their nearest neighbours. There are no materials, no inventions, no new processes of one country that are not immediately known over all the world and employed everywhere. . . . More and more will architecture become universal—there will be little beside the conditions of climate and material which will make diversity."

THE NATIONAL POLICY AND BUILDING.

ABOVE the clash and fury of war we hear the clamour of the economists, the educationists, and the politicians, each with their own special scheme for securing to this country the full benefits of victory when it comes. The first want tariffs; the second technical education; and the last want many things—from taxes on enemy subjects to a general system of bounties and subsidies, either to special manufactures or to the ships which carry them.

All these require earnest attention in good time, but none of them alone will succeed in the main object, which should be to secure the economic independence of the Empire. We must never again allow ourselves to be caught in the condition in which we were, with our metal market in foreign hands, and the primary essentials of many of our industries only obtainable through alien channels. By permitting these things we have, as Sir Edward Carson says, been quietly forging the means of our own undoing.

The discussion of the political aspect of these questions does not come within our province. We are concerned with the industrial welfare of the country, and especially with that of the building trade. Great catastrophes like the present war must inevitably produce far-reaching results, and the whole economic circle of wages, rent, and the cost of building must receive a rude shock—its extent must depend upon the movement of wages in other trades, and this, in turn, upon the arrangements made as to tariffs. A general increase in cost of living is bound to be followed by general rise in wages, and that involves higher cost of houses and higher rents. Although, therefore, the building trade would be but slightly affected directly by a tariff—only such materials as glass, asphalt, steel and ironmongery being affected—the question seriously affects the trade indirectly. It is our largest industry, and is one of the few trades in which there is no competition from abroad. It is one in which we have excelled greatly, owing to our command of such varied and sterling materials and our innate genius for sound construction and beauty in form attained without effort.

We are asked to co-operate in a movement which aims at economic national independence, the raising of trade questions out of the field of politics, and the organised co-ordination of trade science and banking. Let us see what is the bearing of these proposals upon the future of the building industry, and what steps, if any, should be taken to protect it.

The Institute of Industry, which entertained recently such a distinguished body of leading manufacturers, has launched a campaign which has these objects for its purpose. Sir Edward Carson urged concentration of the efforts of traders and warned them against too many minor organisations; and here, it seems, is a chance to bring all the trade organisations together with one common object.

We entirely approve the main ideas and hope to see the Institute prosper, but we confess that we have our doubts as to whether traders will be persuaded to join until its programme is more definite. Many of the things suggested could be done by the present trade societies, and nothing but the formation of a clear programme of action will, in our opinion, capture the main body of traders.

The French Chambers of Commerce demand certain specific measures, such as an Allied Customs Union with bounties for exports, subsidies for merchant ships and mutual concessions, also measures to prevent money of the Allies being attracted to enemy countries by high interest, suppression of quotation of enemy shares, heavy taxes on enemy subjects, and higher rates on enemy trading houses, etc.

Some such schemes might well be adopted by the Institute of Industry as conducive to better trade at home, and beyond these traders would have opportunities of putting any other ideas before the Board for discussion.

For builders in particular here are some reforms which have long been evidently needed which this Institute might encourage. For instance, the better education of the workmen is a vital necessity, and there should be fixed grades of efficiency and wages should be regulated accordingly. The Institute might do good service in organising some plan of this kind. The trade unions might suitably assist. It would be a good augury for the future if they would show that they consider the efficient performance of the duties of the men to be not less important than the assertion of their rights. For employers we want better organisation of capital and the means of production, better facilities for training supervisors and better banking facilities. All these can be secured better through a general body of employers than through an isolated trade society.

Banking credits would be, however, a double-edged concession. In Berlin, for instance, we see that as a result of the easy terms of finance, large tracts of ripe land have been bought and sold again until ground rents have become much inflated and speculative builders demoralised.

As it is, our banking system is a protection against wild-cat schemes and over-speculation. Where the security is a permanent one there are always the insurance companies, but they usually demand redemption policies which provide for extinction of the loan in less than forty years. At the same time it must be remembered that they remove the serious risk which an ordinary mortgagee has to run of having his mortgage called in. The shortening of the period of loan is a step in the right direction.

Foreign contracts naturally require more support from the State than home contracts. The consular service must be improved, and our interests closely watched and information promptly given.

Perhaps the greatest service the Institute could do for building would be to stimulate in the public mind an interest in British real estate by collecting data to show the returns of existing property companies, and indicating profitable investments of this kind and encouraging reconstructions wherever necessary to avoid waste. This would stop the flow of capital abroad which did so much to retard developments here during the last twenty years.

GENERAL NEWS.

The Wallace Collection.

It is stated that the Wallace Collection, Hertford House, will be closed on February 1 till further notice.

Dover Rural Surveyorship.

At the meeting of the Dover Rural District Council recently, Mr. T. W. Woodruff was appointed Surveyor in place of the late Mr. Sargent. There were 160 applications for the appointment. Mr. Woodruff has acted as clerk of the works on the building of the East Kent Colliery village.

Strand Property Sale.

At the meeting of the London County Council on Tuesday it was agreed to purchase No. 25, Strand—needed for the improvement scheme—from Mr. Appenrodt for £15,550 leasehold. This money, with 5 per cent. interest, will not however be paid until one year after the termination of the war.

Electric Trains to Kingston.

Electric trains are to start running on two more sections of the London and South-Western Railway on Sunday next. The electric trains are now running on the short section from Waterloo to Wimbledon, *viâ* East Putney, and the new sections are the Kingston line from Waterloo and back, and the Thames valley line to Shepperton.

British Bridges for India.

It is stated that the contracts for 127 lattice-ype girder bridges, for the extension of the ymensingh-Bhairab Bazar section of the ssam-Bengal railway system, and for fourteen ridges, ranging from 20 to 60 metres (65 ft. to 96 ft.) span for the Federated Malay States ailways have recently been awarded to the leveland Building and Engineering Company, td., of Darlington.

British Industries Fair.

We understand that the Board of Trade ave let all the space available for exhibitors t the forthcoming British Industries Fair t South Kensington, subject to the restrictions f the Ministry of Munitions, where it is considered that the country's vital interests in he production of munitions, transport, etc., ould be prejudicially affected by permitting ertain firms to take part.

London Building Trade.

In the House of Commons on Thursday last eek Mr. W. T. Wilson (Labour, Westhoughton) sked the Prime Minister whether he had been sked by the London Master Builders' Association to meet a deputation from that Association o discuss the question of suspending or canelling contracts entered into prior to August 4, 914; and whether, before coming to any ecision on the matter, he would meet a eputation of the representatives of the orkmen engaged in the building trade.—Mr. squith: "No, sir. I have received no such equest."

Church Building Society.

The Incorporated Church Building Society eld its usual monthly meeting on the 20th nst. at the Society's House, 7, Dean's-yard, estminster Abbey, S.W., Lieut.-Colonel the on. G. H. W. Windsor-Clive in the chair. rants of money were made towards building ew churches at Cwmbran, St. Gabriel, lantarnam, Mon, £175; and Preston, St. uthbert, Lancs, £125. A grant of £20 was lso made towards reseating and repairing e Church of St. James, Newton, Cambs. rants were also paid for works completed t Shoreditch, St. Michael, Middlesex, £25; alisbury, St. Mark, £75; and Lambeth, Holy rinity, Surrey, £50. In addition to this e sum of £332 was paid towards the repairs eighteen churches from Trust Funds held y the Society. The Society likewise accepted e sums of £500 and £200 respectively as epair funds for the churches at Stanley, St. aul, Liverpool, and Charnock Richard, Christ hurch, Lancs.

Mr. McKim's Royal Gold Medal.

The House Committee of the American Institute of Architects has arranged for a cast to be made of the Royal Gold Medal presented on the recommendation of the R.I.B.A. to Mr. Chas. F. McKim in 1903, the original of which, at the request of Mr. McKim's daughter, is kept in possession of the American Institute. The cast will be gilded and appropriately placed in the Octagon (the premises of the Institute), and the orginal will be retained in a safe-deposit box.—*Journal* of the R.I.B.A.

Building at Hendon.

The war has had a great effect upon development in Hendon, although builders during 1915 were by no means idle. In the course of the twelve months the Council had under consideration 133 applications for approval of plans. Road-making was practically at a standstill; there was also a great falling-off in the number of dwelling-houses erected, as well as in buildings of the warehouse class. The total number of houses completed during the year 1915 for occupation was 486, the number in 1914 being 615 and 661 in 1913. At the end of the year exactly 200 were in course of erection as compared with 478 on December 31, 1914, while the number at the close of 1913 was 526.

R.I.B.A. War Record.

A Record is being kept at the Institute of Architects of the names of all members of the architectural profession who have joined the military or naval forces of the Crown for the period of the war. The list includes practising architects, their assistants and pupils, and architectural teachers and students, whether attached or not to the R.I.B.A. or other architectural body. So far some 2,100 names have been entered on the Record, but lately, in spite of the recent boom in recruiting, very few names have been received other than those of members of the Institute. The co-operation of members and non-members is specially invited in order to make the Record known and to bring about its completeness.

Garden City Movement.

The annual Report of the First Garden City, Ltd., gives evidence of considerable progress in the past twelve months. In February a combination of two Belgian engineering industries was attracted to the town, and by June were at work in three large buildings, and are now employing 1,200 men. The present population of the city is approaching 12,000, and, although 3,000 are Belgians, there is every likelihood that there will be a demand for houses for some time to come. Some hundreds of new cottages have been erected by various housing societies and by the Hitchin District Council. The accounts show that the net profit for the year was £5,823, an increase of £2,621 over the preceding year.

New Bridge across the Neva.

The fine new Palace Bridge (Dvortsovy Most) across the Neva, so styled, says the *Times*, on account of its situation almost immediately opposite the Winter Palace, is rapidly approaching completion. The bridge has been constructed in accordance with the plans of A. P. Pshenitsky, which were tendered at the competition announced by the municipal administration in 1908, R. F. Meltser being responsible for the architectural portion. It is a five-span structure, with a length of 246·94 metres between the shore abutments. There are eight girders in the width of the bridge, the distance between each being 3·60 metres. They are calculated to bear a load on the tramway lines of cars weighing 22 tons. The movable central span consists of two equal leaves. For opening it two methods are available—viz., mechanical, by means of electric motor; and hand, with the aid of a capstan. The piers rest on caissons sunk with the help of compressed air into the ground to a depth varying between 23·75 and 27·86 metres. Their working chambers, after they had been immersed to the required depth, were filled first with rubble and subsequently with concrete.

Lectures on War Memorials.

Professor S. D. Adshead, M.A., F.R.I.B.A., will deliver six public lectures on "War Memorials," illustrated with lantern slides, at the University of London, University College, on Wednesdays, at 5.30 p.m., beginning on January 26. Admission will be free.

General Closing of Museums.

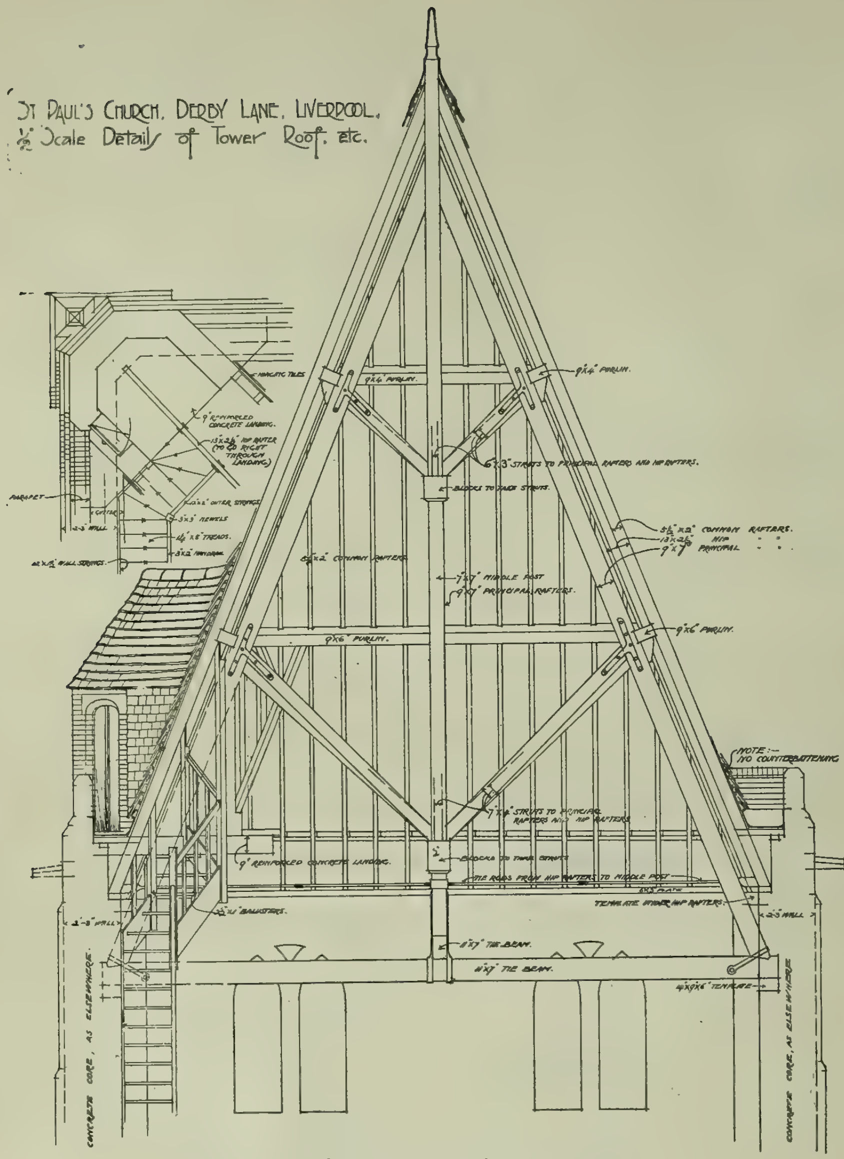
The closing of the British Museum on the ground of national war economy is now officially announced. This step, it is definitely stated, forms part of a general plan for closing museums throughout the country. The statement on the subject, issued by the Director of the British Museum on Saturday, is as follows:—"In accordance with the decision of the Government that all public museums and galleries should be closed, the British Museum (including the Natural History Museum) will shortly be closed to the public. The Reading-room will remain open, but will be closed at dusk. Fuller particulars, including the precise date of closing, will be announced later."

Raphael and Michelangelo.

Mr. C. J. Holmes, M.A., Director of the National Portrait Gallery, gave at the Royal Institution on Saturday last the first of two lectures on "Raphael and Michelangelo." The lecturer said that many people thought that the education of an artist was limited to the years of his youth, whereas in reality the process of education lasted throughout his life. Reynolds in England and Rembrandt in Holland were perfect illustrations of this process of development. The evolution of genius might be likened to the growth of an organism in its response to the influence of every variety of stimuli. The case of Michelangelo strongly supported this contention. The process of change was going on all his life. He was in turn sculptor, painter, poet, and architect. Raphael began as a provincial stimulated by the intellectuality of Florence, then moved by the greatest genius of the Renaissance in Rome. This stimulus incited his talent to an extraordinary pitch of efficiency. He became almost omnipotent in the art world. He was architect of St. Peter's, surveyor of antiquities, and was overwhelmed with commissions under the stress of which he finally succumbed.

Preservation of London Commons.

Mr. Lawrence W. Chubb read a paper before the Royal Society of Arts recently on "The Common Lands of London," describing the work of the Commons and Footpaths Preservation Society, of which he is Secretary, in its fifty years of existence. He pointed out that between 1710 and 1809 about five million acres of common lands were divided, 219,724 acres being enclosed in the counties bordering London. Some of this land had since been repurchased on behalf of the public, as in the case of Hainault Forest. Greater London was still the happy possessor of 15,900 acres of common land. Every common ought to be under regulation to ensure law and order and its preservation as an open space. Our commons and parks had lately been put to extensive military uses, and had been the means of saving vast sums that would have had to be spent on training-grounds. It was not to be thought that after the successes of the Society nothing further remained to be done. But a new spirit prevailed, for the Inclosure Commissioners, who facilitated the appropriation of common land, had ceased to exist, and the Board of Agriculture, who took their place, were bound to regard public rather than private interests. It would be folly to sacrifice the commons on the altar of utilitarianism while millions of acres of enclosed land lay idle in the productive sense. Illegal enclosures were still taking place, and undesirable schemes of afforestation required to be watched. No one would assert that London was too well equipped with facilities for recreation when it was realised that there was but 1 acre of open space in London proper for every 678 inhabitants, while in Southwark there was only 1 acre for every 14,500 persons.


St Paul's Church, Derby Lane, Liverpool.
½" Scale Details of Tower Roof, etc.
Magnetic tiles
9"×4" purlin.
9" reinforced concrete landing.
13"×2½" hip rafter (to go right through landing)
6"×3" struts to principal rafters and hip rafters.
Blocks to take struts.
Parapet
Outer strings
Gutter
2'-3" wall
3"×3" newels
1¼"×8" treads.
3"×2" handrail
Wall strings.
5½"×2" common rafters.
5½"×2" common rafters.
13"×2½" hip " "
9"×7" principal " " .
7"×7" middle post
9"×7" principal rafters.
9"×6" purlin.
9"×6" purlin.
Note:— No counterbattening
7"×4" struts to principal rafters and hip rafters
9" reinforced concrete landing.
Blocks to take struts
Tie rods from hip rafters to middle post
6×5 plate
Balusters.
Template under hip rafters.
2'-3" wall
2'-3" wall
9"×7" tie beam.
9"×7" tie beam.
4½×9×6" template
Concrete core, as elsewhere.
Concrete core, as elsewhere.

St. Paul's Church, Derby-Lane, Liverpool.
Mr. G. Gilbert Scott, F.R.I.B.A., Architect. (*See page* 88.)

CORRESPONDENCE.

Closing of the Museums.

SIR,—The National Portrait Gallery is now closed to the public, the Wallace Collection will be so at the end of the present month, and it is announced that the British Museum (carrying with it the Natural History Museum) will shortly follow suit.

The wisdom or necessity of such action has been challenged, both in the *Times* of Saturday last and in an interview with a well-known critic published by the *Daily Telegraph* in last Monday's issue; but, while I fully appreciate the untiring efforts of Sir Claude Phillips to impress upon the public attention, and that of the Government, the necessity for more adequate protection of the art treasures contained in our great museums and public buildings, I do not feel that he gives sufficient prominence to the loss in the intellectual life of the nation which the total closing of our museums will entail.

"Economy in education," says the *Times* in its excellent leader of last Saturday, while showing that the educational use of museums is better understood to-day than ever it was, "is the least desirable of all economies, because it may inflict a permanent injury on the next generation."

In a living and growing democracy such as ours art must be considered in no sense as the hobby-horse of a few rich men and collectors, but as part of the vital force of the nation—nay, even of the race—as an influence which is to enrich and fertilise our whole national life.

We are out to win in a great fight—to win for the world which is to come the battle of democracy; and this fact is, I fully believe, beginning to be realised by the great democracies of America. But beyond the present stress of conflict we have to carry forward our very best material in art and thought and science to the years of reconstruction, which are before us when this incubus of European militarism shall have received its death-blow.

In this matter we have a duty not only to ourselves but to our Empire without; but if, as I believe, our true political future lies in the closer economic union of that Empire, so, too, our museums, with all their attendant activities, supply an outflow from the Empire's heart to every small township in Canada, Australia, and South Africa.

If, as Sir Claude Phillips says, their closing is necessary to give adequate protection to the contents, then we would all accept our loss as part of the great war sacrifice.

But is it so necessary?

Will the economy effected by the partial reduction of an already diminished staff—partial because police and fire-protection and general safeguarding must be continued—balance the loss to our intellectual energies, the opportunities for reference or study withdrawn from readers, architects, artists, and art students (the very class who suffer most from the present conditions), the probable interference with valuable lecture work, the loss to assistants trained to this specialised work—in a word, will the dislocation of a whole vast organisation of beneficent energies be worth the money saved? SELWYN BRINTON.

Burlington Fine Arts Club, W.

Apprentices.

SIR,—Mr. John P. White, of Bedford, in his letter in the *Builder* of December 3, points out the dearth of apprentices in wood-working craft, and "J. G. W.," in the *Builder* of December 24, says the question must be taken in hand nationally through our educational system. Anyone who has studied this most important, urgent, and indeed overdue question will agree, I think, broadly with each of those correspondents, but the difficulty is a practical remedy.

My object is to point out what has been done by the Institute of Builders, the body officially representing the building trade of the kingdom. Some four or five years ago the Institute discussed and formulated a scheme of apprenticeship which meets the point put by the above correspondents, and has since been doing its utmost to get the scheme adopted for London by the education authorities, but without success. The scheme includes provisions which may be shortly stated.

Early in 1912 the Institute submitted to the London Education Authority a constructive scheme of apprenticeship that would enable suitable boys to learn a trade under proper conditions directly they leave the Elementary School, on the lines following:—

(*a*) That the school age should be raised for such apprentices by two or even three years, so as to strengthen supervision and maintain, for part at least of the apprenticeship period, some connection between school and workshop.

Note.—This provision supplies the "more intimate link" desired by "J. G. W."

(*b*) The indentures recommended by the Institute of Builders were for a period of five years in workshops and on jobs, so that a boy could learn his trade under actual working conditions.

(*c*) That time on two afternoons in each week at full pay should be given to the study of the theoretical side of the chosen trade during the first two or three years of the apprenticeship term, so that theory and practice should advance together.

(*d*) Where a premium is required with an apprentice the Institute scheme would apply to the payment of such premiums a part of the money at present spent by the Education Authority in scholarships and similar rewards, sums now used mainly in subsidising non-industrial branches of higher education or in maintenance grants.

Note.—By this provision there would be no increase in the education rate.

(*e*) The connection between school and workshop, referred to in Clause A, could be maintained by a small voluntary advisory committee of managers and employers for each district or school division.

(*f*) The Institute scheme also included a schedule of premiums and rates of wages; these rates of pay are a very considerable advance on the wages until now being paid generally in the building or any other trade. The weekly wages in this schedule starts at 8s. 4d. per week of fifty hours, and in the fifth year rises to 27s. 1d. per week (or 6½d. per hour), and while they do not, and cannot, compare with boy wages at present obtaining owing to war conditions, the parental sacrifice of present advantage for the ultimate good of the boy is surely not a heavy one.

(*g*) Where no premium is paid the Institute's schedule of wages is rather less, so as to provide for payment of premium out of wages.

(*h*) A further part of the scheme is the provision of a bonus of £25 to the apprentice on completion of indentures for the purchase of tools, etc.

These are the main points of the scheme which was first put before all the borough councils of London and approved by twelve or thirteen of them, only one council having returned a definite negative and the rest making "no order."

The scheme has been carefully considered by educational experts, and is considered to contain the nucleus of a workable permissive

:heme which would gather in the boys between ɔurteen and fifteen years of age and take hem direct from the school to a trade, and hus prevent the wastage of good material rifting into "dead end" jobs, having no ltimate benefit when the boy becomes a man rith a man's opportunities and responsibilities.

The scheme has been before the Higher Education Committee of the L.C.C., and has een explained in conference with the ommittee, but, while sympathetic, the ommittee held that they had no statutory ower to adopt it.

The Institute has therefore this year ecided to request the co-operation of the ational Federation of Building Trades mployers of Great Britain and Ireland in ousing interest in, and support of, the scheme the building trade throughout the country, ith a view to Parliamentary action and the ovision of the necessary permissive powers the next Education Bill that must come efore Parliament and the country when e war is happily ended.

I apologise for the length of this letter, but e great importance of the matter is my cuse.

Thomas Costigan
(Secretary).

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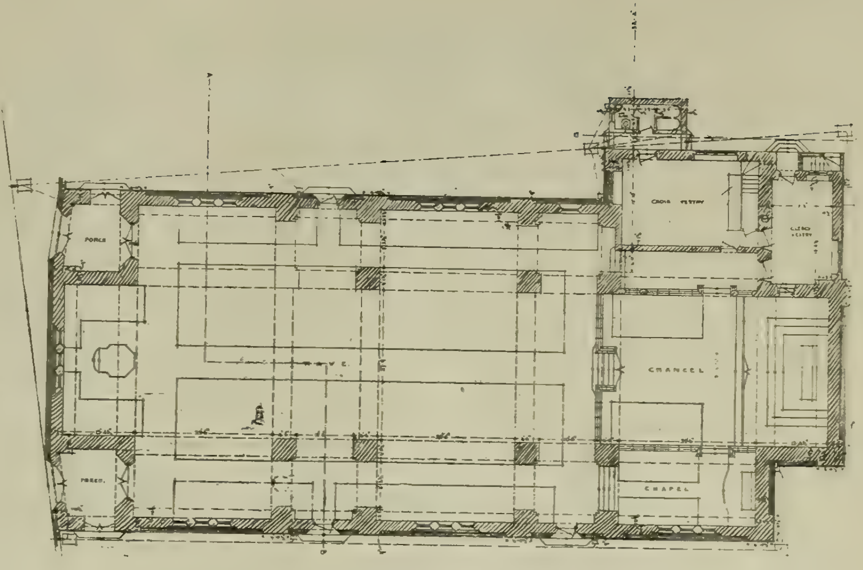
ARCHITECTURAL SOCIETIES.

Architectural Association of Ireland.

"Belgium: Her Glory and her Woe," was e subject of a lecture, profusely illustrated th lantern slides, given on the 20th inst. by r. Harry Allberry, A.R.I.B.A., before the embers of this Association in their oms, 15, South Frederick-lane, Dublin. Mr. G. Leask presided. In the course of his per the lecturer dealt with the notable chitectural examples, mediæval and modern, the cities and larger towns which are at esent in the hands of the Germans. Describing e devastating march of the invaders from ége, through Brussels, to Antwerp, and the ble buildings and the havoc wrought to em in Louvain, Ghent, Bruges, Malines, urtrai, and Dinant, until the advance of the emy was stopped by the artillery of the lgian, French, and British armies in and ound Ypres, the lecturer recounted the history most of the famous ecclesiastical and civil ildings in the country, and the destruction ey had suffered from the guns of the Germans. the motion of Mr. Richard O'Brien Smith, conded by Mr. George G. Lynes, a vote of anks was passed to the lecturer.



St. Paul's Church, Derby-Lane, Liverpool.

Mr. G. Gilbert Scott, F.R.I.B.A., Architect. (See page 88.)

LAW REPORT.

Important Decision as to Drainage.

Recently, in the Marylebone County Court, before his Honour Sir W. Lucius Selfe, the Willesden Urban District Council sued Mr. William Taylor, builder, of Westbourne Park-villas, Paddington, for £39 6s. 3d., being the cost of repairing drains at one of his properties, 82, Princess-road, Willesden.

The facts were, that, acting on the information of a common informer, the Council sent one of their inspectors to view the drainage complained of, and on his report gave the defendant notice to do certain repairs. On a subsequent date the inspector called again, and reported to his Council that work had been done, but not of the nature demanded by the Council. Further notices were served on the tenant and the owner, and a date fixed for inspection—January 19 last. On the inspector and his workmen appearing at the premises they were refused admission. Thereupon the Council entered under an order from the magistrate, and did the necessary work, the cost of which was now sued for, with interest from the date of claim. It was stated that in May last the defendant entered an action for an injunction to prevent the Council carrying out the repairs, but that action was not proceeded with.

Mr. Herbert Davey, for the plaintiff Council, called the inspector to prove the state of the drains and the delivery of the statutory notices.

Mr. Adlington Willis, for the defendant, proposed to show that there was no such defect in the drains, as alleged, to make them injurious to health or a nuisance.

His Honour declined to hear this testimony, saying that that evidence should have been produced before a Local Government Board inquiry. Defendant's remedy was to have appealed to the Local Government Board within twenty-one days of the notice to repair, and his evidence would have been of avail at the consequent inquiry. In the circumstances he would order the defendant to pay £38 7s. 11d. into Court within a month, with the costs of this day, and that would give him an opportunity of appealing to the Local Government Board, if he was so advised.

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FIFTY YEARS AGO.

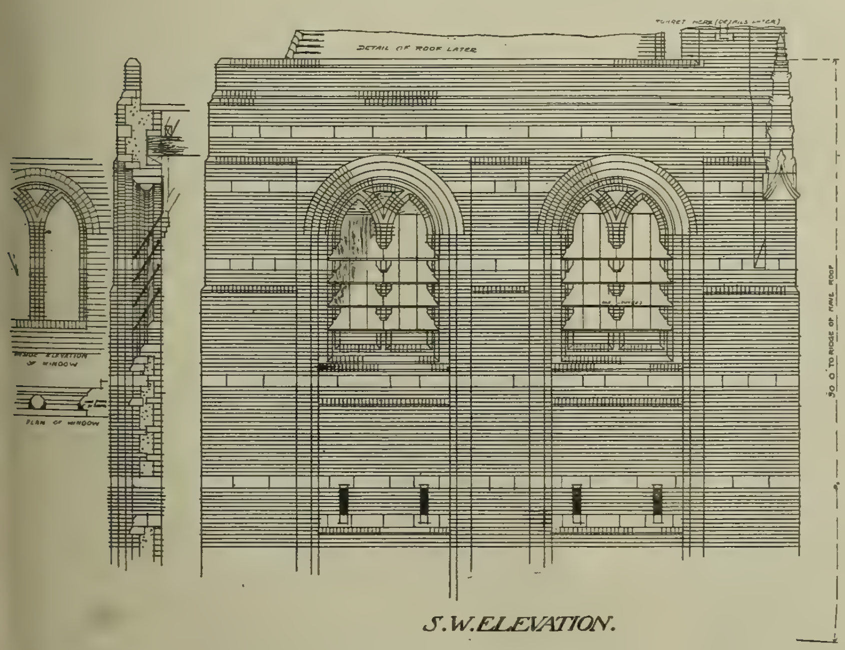
Competitions.

Newcastle Cemetery.—The first premium for buildings has been awarded to Messrs. Bellamy & Hardy, Lincoln. The second for buildings, Mr. Stallwood, Scarborough. The first premium for laying out grounds, Messrs. Bellamy & Hardy; the second for carrying out grounds, Mr. Miller, Newcastle. The works are to be commenced at once under the direction of the successful competitors.

Neepsend Church, Sheffield.—Designs have been submitted to the Committee of the Church Extension Society in Sheffield for a new church to be erected at Neepsend, by the following architects:—Messrs. Flockton & Abbot, Messrs. Blackmore & Mitchell Withers, and Mr. Fletcher, all of Sheffield; and Mr. Thomas Charles Sorby, of London. The Committee have selected that by the last-named gentleman, and immediate steps will be taken towards the erection of the building.

The Reading New Workhouse.—Plans for the workhouse, to be erected in the Oxford-road, were recently sent to the Board of Guardians by six architects of this town, and the Poor Law Inspector on his last visit selected two, one executed by Mr. Woodman, and the other by Messrs. Brown, expressing, however, his preference, on several grounds, for Messrs. Brown's plan. The Board have finally selected Mr. Woodman's plan.

[*** We give the above extract from the *Builder* of January 27, 1866.—Ed.]


DETAIL OF ROOF LATER
TURRET HERE (DETAILS LATER)
INSIDE ELEVATION OF WINDOW
PLAN OF WINDOW
50' 0" TO RIDGE OF MAIN ROOF
S.W. ELEVATION.

St. Paul's Church, Derby-Lane, Liverpool.

Mr. G. Gilbert Scott, F.R.I.B.A., Architect. (*See page* 88.)

Leading Contents.

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ILLUSTRATIONS.

St. Mary-le-Bow and St. Swithin.

WE reproduce these two plates from "The Churches of Sir Christopher Wren," by J. Clayton, which was published by Messrs. Longmans, Green, Brown & Longman in 1848, and which we give, by the courtesy of Messrs. Longmans, Green, & Co. The arcade shown at the side of the steeple of St. Mary-le-Bow was unfortunately never executed. In the elevation of St. Swithin given the "stone tracery" is omitted, and it is to be regretted it was ever added, as it is out of keeping with the style adopted by Wren. Further notes on these churches will be found on page 90.

St. Paul's Church, Derby-Lane, Liverpool.

THE style is Gothic, freely treated, and adapted to meet the special requirements of the materials employed. Externally the church is faced with small silvery-grey bricks, specially made for the work. The roof is covered with hand-made tiles.

The inside of the building, including the vaulted ceiling, is plastered, with the exception of the quoins, arches, and dressings round windows and doors, etc., which are composed of the bricks previously mentioned.

As regards the general design of the church, an attempt has been made to obtain an effect by largeness of scale and dignity of proportions rather than by elaboration of treatment. The main idea consists of three transepts on each side of the church, with a large square tower at the intersection of the central transept with the main roof. Internally the intersection of the transept vaulting with the main vault produces an original and striking effect, and results in the main arcade being composed of alternate high and low arches. In the transepts at each side of the church and in the end gable facing Derby-lane are groups of three tall lancet windows.

The principal dimensions of the church are as follows:—

Internal length, 142 ft. 3 in.

Width of nave and of chancel, 27 ft. 9 in.

Total internal width of church, including aisles, 57 ft. 4 in.

Height of nave and chancel roof, 40 ft.

The tower rises to a height of about 80 ft., and is surmounted by a pointed roof, making the total height to the apex about 108 ft.

Accommodation is provided for a congregation of about 640.

The contractors were Messrs. Morrison & Sons, of Wavertree, Liverpool.

G. GILBERT SCOTT.

Design for the Third Church of Christ Scientist.

THE design illustrated was submitted in competition some years ago for a church on the north side of Curzon-street, opposite the upper end of Clarges-street. An alternative treatment of the church, with a range of columns, is shown on the left-hand side of the interior view given, and was prepared at the request of the Church Committee.

MEETINGS.

FRIDAY, JANUARY 28.

Glasgow Technical College.—Mr. C. Ernest Munro, A.R.I.B.A., on "The Construction o a Factory in London." 7.45 p.m.

MONDAY, JANUARY 31.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher 4.30 p.m.

WEDNESDAY, FEBRUARY 2.

Royal Archæological Institute (at Burlingto House, Piccadilly). — Ordinary meeting 4.30 p.m.

Carpenters' Company.—Mr. Lawrence Weaver F.S.A., on "Memorials and Monuments. 7.45 p.m.

Institution of Civil Engineers of Ireland.— Ordinary meeting. 8 p.m.

THURSDAY, FEBRUARY 3.

Royal Institute of British Architects.—Busines meeting. Election of members. 3 p.m.

University Extension Lecture (at the Britis Museum).—Mr. Banister Fletcher. 4.30 p.m.

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OBITUARY.

Mr. W. G. Jones.

The death is announced of Mr. William Georg Jones, who for many years practised as a architect in Woking, of which town he was native. The deceased, who was forty-seven year of age, for some years previous to starting o his own account was associated with Messrs. J. Harris & Son.

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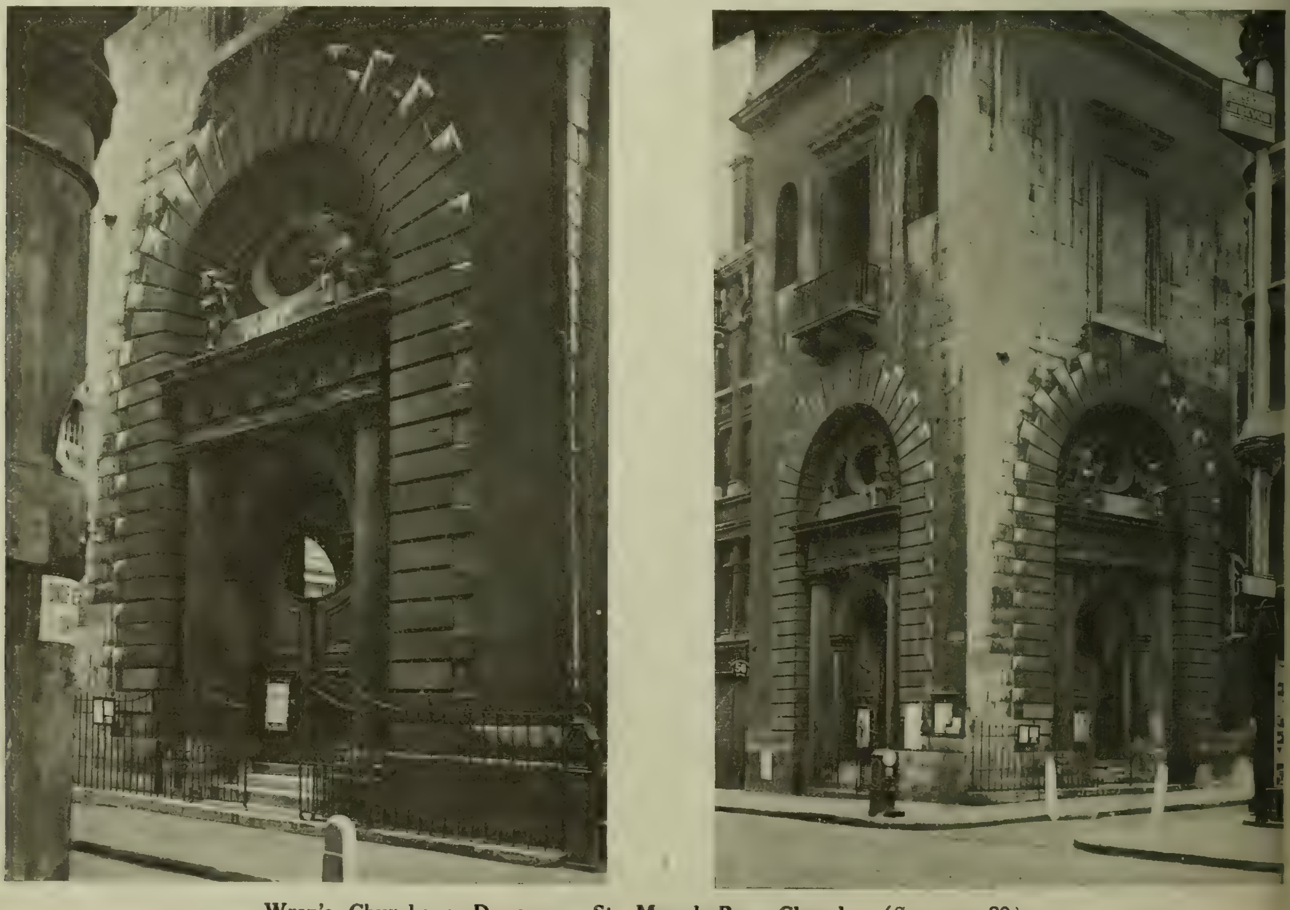
BOOK RECEIVED.

PAINT AND COLOUR MIXING. By A. S. Jennings. Fifth edition. (London: E. & F. N. Spon, Ltd. 6s.)



Wren's Churches: Doorways, St. Mary-le-Bow Church. (*See page* 90.)

ARCHITECTURAL SCHOOLS SECTION.

ARCHITECTURAL DECEPTIONS.

ALL civilised peoples, especially in the West, have held truth to be one of the greatest of virtues. The efforts of cientists are defined as the search after truth, nd it is natural that what has been considered o be axiomatic as applied to life and thought hould find an echo in the phraseology of art. The emphasis laid on truth has been the basis of Ruskinian criticism on art, and, though we more frequently hear now that architecture hould be the logical expression of structure, he implication still remains that architecture hould be condemned or praised chiefly on the basis of its truthfulness. Truthfulness usually mplies modesty, sincerity, and reserve, a feeling expressed by Shakespeare when he ays :—

> You that choose not by the view
> Chance as fair and choose as true.

And so it happens that the magnificence of Roman architecture and even the refinements f Greek art have not appealed to those whose minds have been obsessed with a sense of the alue of truthfulness in design, while the ruder xteriors of the great mediæval structures have been considered to enclose the jewelled casket f sincerity and perfect beauty. Enthusiasts have tended to overlook the fact that in more outhern climes the relative importance of xternals was always naturally greater than n less genial climates, and that it was as natural for Greek or Roman to display what was greatest in his art externally as for the mediæval builder to reserve it for interior ffect and to seek protection for it from the nclemencies of climate. Analytically we may uestion whether the builders of the great French cathedrals—perhaps the most logical xpression of purely structural requirements he world has seen—were not more governed y the enormous structural and financial ifficulties of raising the great cathedrals than nything else, and whether, given ampler means, hey would have hesitated to hide the masses f stone scaffolding formed by flying buttresses ehind screen walls. As it is, the western fronts of most of the French cathedrals considered by themselves hide and do not express he structure behind them. The west front f Salisbury is expanded at the sides into a quare screen, hiding the construction of the isles behind, and it is for the most part in maller churches that the west front becomes n expression of the structure of the building. t is probable that in placing their towers he mediæval builders were fully aware of the nsatisfactory nature of the outlines given by tructural form, and concealed them where it was possible to do so, while further south the talians showed in the west fronts of Siena, Orvieto, and other cathedrals how little regard hey had for the truthful or logical exposition f construction, though it must be admitted hat in the early Renaissance the disregard f structural form was carried even further, s many of our Elizabethan and Jacobean tructures testify. But criticism has been so rgely concentrated on the vices of the Renaissance that the sins of earlier times have assed almost unnoted. Most Southern races ttach a relative importance to external reatment which has no counterpart here, hough there are exceptions to the general ule. The Byzantine builders built from within outwards, and were usually careless of he external effects of their design, governed as t was by the desire to enshrine the mysteries f religion. The architecture of the Egyptians was the expression of mystery and organised riestcraft, and was concentrated chiefly on he treatment of internal courtyard and the anipulation of form to obtain effects of light nd shade in their many-columned hall. But he complaint preferred against our architects hat they consider external effect often to rgetfulness of internal convenience shows he national trend of thought. The cult of the Renaissance, which implies the consideration of proportion and order in form, introduced an element which had been before unthought of, the operation of which was to lead to greater concentration of thought on external considerations; and the task of the English architect is to combine this with a greater attention to internal considerations of design than is usually applied in more Southern lands, so as to combine the natural craving for comfort with the more ordered consideration of architectural qualities only fully understood by the cultured. According to a strictly logical or truthful standpoint, a balustrade or parapet is inadmissible unless it is the outcome of actual necessity, for a parapet frequently conveys the impression that a building is higher than it really is, while the purpose of a balustrade is to secure the safety of those using a platform or balcony.

But if we seek sincerity, logic, or truthfulness in structure we find few of the great buildings of the past will conform to the conditions we lay down, yet we are conscious that there are limitations which govern the designs which appeal to us, separating them from those which do not. One is that the exterior and interior expression of division shall be the same. The division of St. Paul's and many Renaissance churches into two exterior tiers or orders to express a single interior division never completely pleases us, though the same treatment applied to a building having interior galleries seems at once suitable. Conversely, the typical dissenting chapel of the middle of the nineteenth century, with its single external range of windows, severed internally by a gallery, offends our sense of fitness.

But if in a long range of two-storied building it is necessary to introduce a lofty room of the height of two floors, we feel it to be justifiable to light it by a double range of windows, though we are better pleased if a break in the treatment is feasible to express the changed internal condition.

The Chapel Royal at Whitehall, with its two external stories, is justified because it was to form but a part of an immense range of buildings of two stories in height. Had it been designed as an isolated building, Inigo Jones would have been at fault. In the same way it is felt that a few sham windows necessary to give uniformity to an elevation are permissible, but a range of blank windows constituted a defect. Grained woodwork throughout a building, however well it may be carried out, is unpleasant, but we have not the same objection to the marbling of a couple of columns in a large room, nor if for any reason a deal door occurred in a long stretch of oak panelling should we object to having it painted and grained to match the surrounding oak work. If in a long symmetrical front of a building containing lofty and large rooms it is necessary to place a small one, no annoyance is felt because a window far too large for its purpose is placed in it in order to secure the harmony of the façade, but we should be dissatisfied if the alternation of large and small rooms were not marked in some appropriate way in design. Consideration of these and other cases which occur will lead to the conviction that it is not so much truth and logic which we attach high value to in design as broad considerations of reason and fitness conforming to no very definite rules, which lead to the conviction that in matters of art we cannot emulate the certainties of scientific deduction.

There is in art nothing approaching to the logical proof of a scientific truth, because it is reasonable to assume there is nothing analogous to definite truth in art; rather the end to be sought is the golden mean between extravagant fancy and stern utility. Mouldings are the admitted means of subtleties of architectural expression, but, though we can trace how in their rudest form they arose out of the necessities of structure, they have been used almost purely decoratively for some thousands of years.

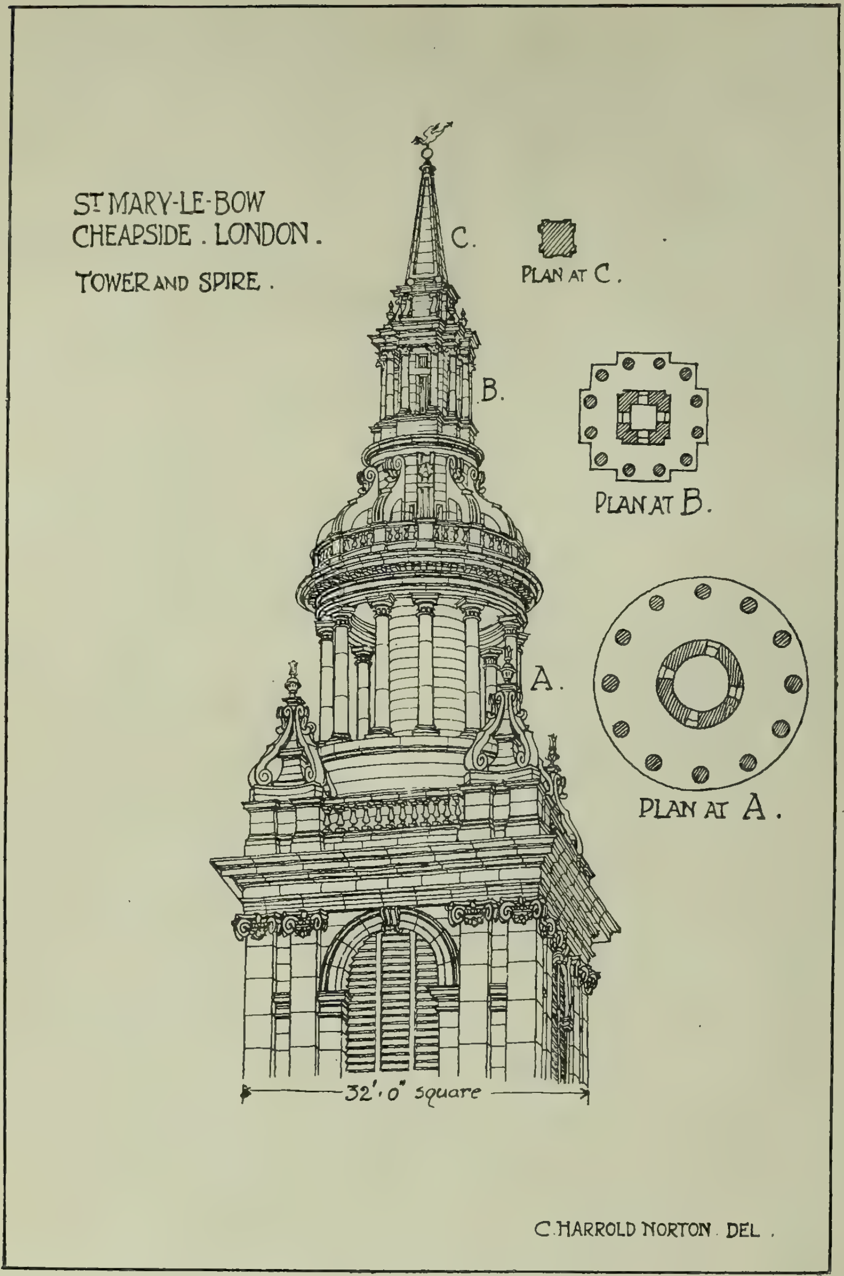
What should be our view of architectural deception when employed for temporary or scenic purposes? An instance in point is afforded by the temporary adjunct erected in front of Westminster Abbey at the time of the Coronation of King Edward. Was it permissible to imitate stone or not? Here it seems to us the sole question was whether the sham stone adjunct was more or less satisfactory in effect than a building of wood. If so, the scheme was abundantly justified in the same way that realism in stage scenery is justified; but if, on the other hand, a wooden building would form a better *mise en scène*, the adopted scheme was an artistic mistake. Any architectural deception which adds to the effect of a great pageant is not only permissible but proper, while the false sentiment and deficient artistic power which makes a Strawberry Hill possible deserves pity and condemnation.

With regard to another form of deceptive imitation—that of nature in architecture—we are on surer ground, and reflection will show that we dislike it for two reasons. Firstly, because it is impossible to imitate nature successfully; and, secondly, if we could do so, the manifestations of nature would suggest growth, change, motion, and decay—in a word, what is transitory; while the greatest charm which a work of art can have is that it should suggest restfulness and permanence. Thus the beauty of a perfect human figure may transcend in its perfection any sculptor's representation; but if it were possible to place in the niches or on the pinnacles of a great building figures so exquisitely modelled and coloured that they would give the impression of life, we should feel uncomfortable, for they would convey a dynamic instead of a static impression, and we should feel them to be out of keeping with the expression of permanence and not in keeping with the building of whose decoration they formed a part. For this reason the decoration of a winter garden in an American theatre carried out with actual foliage preserved in a petrifying solution was bad art, however successful in effect it might have been; nor would many worshippers at the shrine of mediæval art admire the custom that induced many of the mediæval builders to colour the leaves, flowers, and berries in their decorative ornament in natural colours. Such decoration must either have failed because it challenged comparison with nature so well as to do away with the static quality in architectural design, or so badly that it left room for criticism.

Our survey will convince us of the danger of dogmatism and the futility of importing terms which, reasonable and convincing as used in science and other branches of human thought, have no meaning in the confines of art.

SHORTAGE OF HOUSES.

To the "Welsh Housing Year-Book" for 1916 Mr. Henry R. Aldridge, Secretary, National Housing and Town-Planning Council, contributes an article on "Cottage-building after the War," from which we take the following :—"It is difficult to give any kind of valid estimate of the extent of this shortage of houses, but the writer is of opinion that the present shortage is at least 400,000 (of which 100,000 represents the number of cottages which should be built to satisfy rural needs). In the years following the war we shall therefore need to make up this deficit in addition to providing the number of cottages needed annually to meet the normal needs of the growing population. In this relation a leading authority—Mr. A. W. Shelton, of Nottingham—estimates that: 'Every week from 1,500 to 1,600 new houses are required to meet the normal growth of the population. In addition, at least 600 new houses are each week urgently needed to replace worn-out dwellings, or to mitigate overcrowding in congested areas. To provide these requires an annual expenditure of from £25,000,000 to £30,000,000 sterling.'"



THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. V.—St. Mary-le-Bow.

The church of St. Mary-le-Bow stands on the site of an older building which was destroyed in the Great Fire. The old church had a troublous history in 1090. The roof was overturned by a tempest of wind in 1196. At a subsequent date it is recorded that "William Fitzosbert, a seditious tailor, took the steeple of Bow and fortified it with munitions and victuals," and the authorities set fire to the steeple in order to dislodge him. In 1271 a great part of the steeple fell down and killed many people. In 1284 one citizen, having wounded another, fled to the church for sanctuary, but the friends of the injured man got in the church at night and killed him, in consequence of which sixteen men were hanged and a woman named Alice, "who caused the mischief," burnt ; after which the church was interdicted, the door and windows being "stopped up with thorns."

The steeple was rebuilt, and a few years later "the arches or bows thereupon, with the lanthorns, five in number, to wit, one at each corner and one on the top of the arches, were also finished of stone brought from Caen in Normandy."

These lanthorns were meant to be glazed to light the ways in winter. It was from the term "bow," or "arch," that the church derived its name. It was also known as St. Mary of the Arches, and the Court of Arches was formerly held there. It formed one of the thirteen "Peculiars" of the Archbishop of Canterbury in London, and was, and still is, under his jurisdiction. The church was repaired in 1620, but was totally destroyed in the Fire of London, together with St. Pancras, Soper-lane, and All Hallows', Honey-lane, which were not rebuilt after, their parishes being united with that of St. Mary-le-Bow. The parishes of All Hallows', Bread-street, and St. John the Evangelist were also united with that of St. Mary-le-Bow when the former church was pulled down in 1876.

A Norman crypt with three aisles still exists under the greater part of the existing church, and was apparently lighted directly from the sides, the level of the surrounding ground being lower than at present.

Wren's church was begun in 1671, but was not completed till 1680. Its cost was £15,400—a sum greater than was expended on any other of Wren's churches, the steeple costing nearly half of the whole amount.

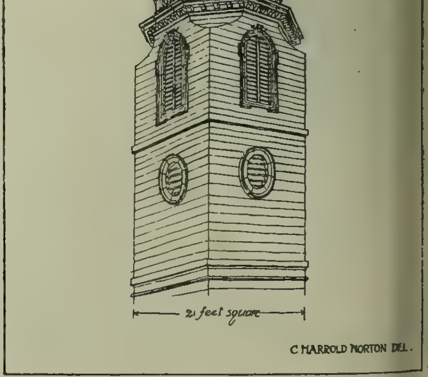
The steeple is justly considered to be among Wren's greatest achievements, and he evidently gave especial thought and consideration to it. The great columned doorways set in recessed semicircular openings, with elliptical openings over the entablatures of the doorways, flanked by cupids holding wreaths, are probably the most poetic architectural expression of the period. The tower is faultless in its proportions, its simplicity making a foil both for the rich doorways and the rhythmically-proportioned columned stories of the steeple above. The church is disappointing when we remember that the space at Wren's disposal exceeds that covered by St. Stephen's, Walbrook, and is even squarer in shape—an advantage for a design based on the dome, but a disadvantage in the case of an aisled design. As it is the church forms a nave with two aisles divided into three bays, the detail of which is without distinction. The east and west walls are pierced with a number of windows which are disturbing in internal composition. It has been modernised and much altered at an unfortunate date of which glass, woodwork, and decoration alike bear trace. Wren's original scheme included an arcade between the steeple and Bow-lane, in the space now occupied by shops, which was unfortunately not carried into execution.

There are several interesting monuments in the church, the chief of which was erected in memory of James Cust—who died in 1706—and six of his children, which takes the form of a pedimented feature with a sarcophagus and bust over. Another interesting monument, of a Greek type, is that to Thomas Newton, who obtained the rectory of the church in 1744 and was afterwards created Dean of Salisbury, Bishop of Bristol, and Dean of St. Paul's, and who edited Milton's "Paradise Lost." The monument to Charles Bainton, who died in 1712, is also of interest.

No. VI.—St. Swithin.

The church of St. Swithin is situated immediately opposite Cannon-street Station, between Salters' Hall-court and St. Swithin's-lane. The advowson is in private hands, and the parish was after the Great Fire united with that of St. Mary Bothaw, which was situated on the south side of Cannon-street, and was not rebuilt. The tower and steeple, like that of St. Mary Abchurch, is placed away from the most prominent front of the church, but in this case the loss is not a great one, since the form adopted, in which the square tower is reduced to an octagon by awkward curves, has little merit or charm.

The windows are divided by mullions with small circular lights in the heads—a form of design which is seen to greater advantage externally than internally. The plan, like that of St. Mary Abchurch, is a square, in this case converted into an octagon above. Several of the angles are marked by half-columns against walls, the remaining angle by a free standing column. Above, the ceiling forms a dome with slightly curved sides, with lunettes on four faces



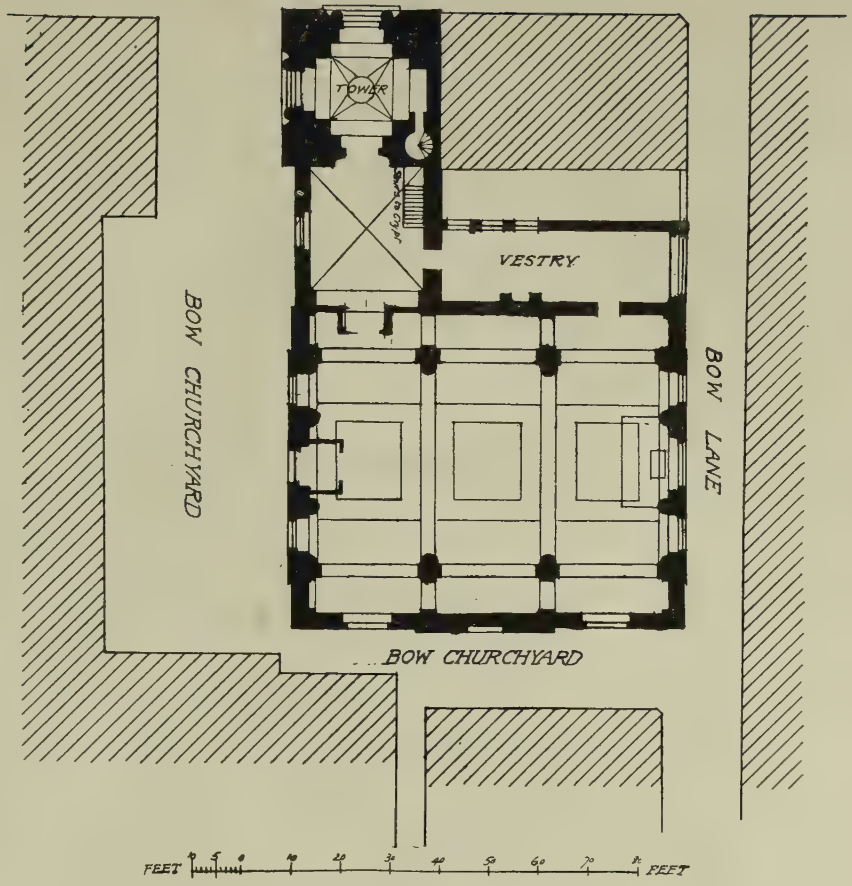
d medallions corresponding in form with
lunettes in the alternative faces, decorative
toons being arranged round the sides of
dallions and lunettes.

The woodwork of the church, though altered
l partly modernised, is good and interesting,
l the church contains some noteworthy
numents, the most noticeable of which is
Baroque one fixed to the face of the
e standing column, which affords a good
ample of the decorative value of Baroque
tail in architectural composition.

It was erected to the memory of Michael
dfrey, a financial expert whose experience
s of much use in connection with the forma-
n of the Bank of England. Being despatched
important business to Namur, which was
ing besieged by William III., he was killed
a cannon-ball in 1695.

On the Cannon-street front of the church
fixed the remains of the "London Stone,"
ich is supposed by some authorities to be the
ntral Roman milestone from which all
tances were measured.

Although St. Swithin is not among those
rches which have suffered most at the
nds of the restorer and ecclesiologist, it is to
regretted that it contains the usual coloured
ss and ecclesiastical additions which are
eign to its style and the designer's intention.
en's churches were intended primarily for
aching in an age which made little distinction
ween the treatment of secular and ecclesias-
al buildings. No additions which can be
de in the way of decoration can alter the
e, while they are as completely out of
rmony with the spirit of the original design
they would be in a Calvinistic conventicle.
s a pity that this fact should not be accepted
the Church, as Wren's buildings form a page
the past ecclesiastical history as well as
the architectural records of our country.
ir galleries, high-backed pews, pulpits with
nding-boards, clear glass windows, and sober
ouring should be considered as forming
t of their charm and character, though not
essarily a precedent for modern imitation.



St. Mary-le-Bow, Cheapside.

(Reproduced from the Ordnance Survey Map with the sanction of the Comptroller of H.M. Stationery Office.)

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BOOKS.

ctural Design. By HORACE R. THAYER.
London: Constable & Co. Price 16s. net.)

s is the second volume by Mr. Thayer
Structural Design, and it deals with the
gn of simple structures, the author
ming, however, that the reader possesses
nowledge of mechanics, stresses, and the
essary mathematics, and that volume one
also been read by him. The first four
pters are devoted entirely to railway work,
are thus of greater interest to the engineer
n the architect, and these are followed
chapter on the design of steel mill buildings,
ch contains some useful matter. The two
t chapters deal with high office buildings
miscellaneous building work, and these are
most useful to the architect. It is hardly
essary to mention that all the actual
nples of high office buildings which are
trated are in America, the most notable
g the Woolworth Building, New York.
details and information dealing with this
s of work are interesting and instructive,
the author has spared no trouble to make
n complete, even the finishings being fully
sidered. The types of buildings described
er the miscellaneous chapters include
tres, grandstands, assembly halls, railroad
ions, and mine structures, and the principal
ts to consider in the design of the structure
ach case are put forward.

he last chapter is devoted to stand pipes
elevated tanks, and this is also quite good.
book is well illustrated throughout and
arranged, and it is a useful addition to
literature on structural engineering.

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s and Clay Products. By ALFRED B.
CARLE. (London: Sir Isaac Pitman &
ns, Ltd. Price 1s. 6d. net.)

s is one of the publishers' series of common
modities of commerce, and no one more
petent than the author could have been
d to deal with the subject. For that reason the volume forms an admirable addition to this series of little works, which are not intended to exhaust the subject dealt with. The chief aim is to give the commercial man sufficient insight into the nature of the various materials and products described for him to realise the processes involved in their treatment and the extent to which they may be used for the purposes of his own business. The work is illustrated and contains a useful index.

Lime and Cement. By J. G. ADAMS and C. A. ELLIOTT. (London: Blackie & Son, Ltd.)

THIS is an admirable little work for boys and girls, which forms one of the publishers' series of "Rambles among Our Industries." The old trade guild arranged for a "wander year," when an apprentice, having served his time, spent a year in wandering from one master to another before settling to his trade. During the "wander year" the knowledge of the young apprentice was broadened, and he learnt the dignity of his craft. A like purpose has led the publishers to add to this series a number of books dealing with the main industries of the country. The work is illustrated and forms an excellent addition to the series.

Engineering Geology. By HEINRICH RIES, Ph.D., Professor of Economic Geology in Cornell University, and THOMAS L. WATSON, Ph.D., Professor of Economic Geology in the University of Virginia and State Geologist of Virginia. Second edition. (New York: John Wiley & Sons, Inc. London: Chapman & Hall, Ltd. Price 17s. net.)

THIS is the second edition of a valuable work of some 700 pages, divided into eighteen chapters, and containing over 100 plates, 250 figures or diagrams, and two useful indices.

The value of proper geological training for the engineer is admitted, and it is necessary that he should have adequate training in at least the fundamental principles of geology in their relation to engineering problems, and it is these principles with which the book before us deals. The authors state that they have attempted to emphasise the practical application of the topics treated to engineering work, "because hitherto, in many engineering courses of study, the subject of geology has not been given the attention which they think it should receive from both professors and students"—a remark, we believe, which is less true to-day than a few years ago. The work is intended primarily for civil engineers, but the authors hope it will be of use to others interested in applied geology—a hope which this admirable work entitles them to express. The value of the book is enhanced by the addition in the second edition of a chapter on "Historical Geology."

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HOSPITAL CONSTRUCTION MATERIAL AND EQUIPMENT, COLUMBIA.

The *Diario Oficial* (Bogotá) of November 16 publishes a law granting 30,000 hectares (about 74,100 acres) of land to the Municipality of Ipiales, in the Department of Nariño. The Municipality will sell this land in lots by public tender and the proceeds of the sale will be devoted to the construction and equipment of a hospital in the town of Ipiales. The plans of the work must be presented to the Colombian Ministry of Public Works for approval.

BUILDING MATERIALS, CANADA.

H.M. Trade Commissioner in Canada (Mr. C. Hamilton Wickes) has forwarded the following inquiries:—A firm in Toronto wishes to be put in touch with United Kingdom manufacturers of building materials other than roofing slates and tiles. (Reference No. 10.) United Kingdom manufacturers of the goods mentioned, and exporters of United Kingdom goods, desirous of initiating business in Canada, may obtain the names and addresses of the respective inquirers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C. In making application the appropriate reference number should be quoted.

THE BUILDING TRADE.

AN ECONOMIC SURVEY OF 1915.

AT the close of a complete year of war it may be of interest to note some of the industrial conditions prevailing in this country generally, and also to note the effect of those conditions on the building trade.

When the possibility of any great war in which this country might be involved was only the subject of speculation the food problem was always much dwelt upon, and alarming pictures were drawn of the straits we might be reduced to, therefore it surely is a ground for considerable thankfulness to find that after seventeen months of the greatest war imaginable the rise in the cost of food is far less than could have been anticipated, and less than half that which has occurred in the continental countries with which we are at war. The average price (retail) of food in this country is 45 per cent. above the level which existed in July, 1914, just before the war, and the rise during the year 1915 has been 23 per cent. In Berlin in November the average price of food was 82 per cent. above the pre-war level, and in October in Vienna prices were 117 per cent. above those prevailing in July, 1914. This unexpected result of the war is due to our Navy, and must be an unpleasant surprise to our enemies, who find themselves occupying the position they had designed for us.

This rise in prices of 45 per cent. would, however, be a serious matter for our industrial population had it not been qualified by two other considerations—a rise in wages and increased opportunities of obtaining work for those who are left at home to carry on the industry of the country.

The changes in the rates of wages, or by war bonuses, have affected 3,165,000 workpeople, and the net result has been an increase of £603,000 per week, which, the *Labour Gazette* states, averages about 3s. 10d. a head. This is exclusive of overtime, and these figures do not include seamen, agricultural labourers, railway servants, police, Government employees, shop assistants, and others.

The mean annual percentage of unemployment for 1915 is 1·1 per cent. as compared with 3·3 per cent. in 1914, and in November and December it was as low as 0·6 per cent.

Although it is to be regretted that any labour disputes should have occurred during the war, yet it will be seen that patriotism has exerted its influence, and, although the number of workpeople involved in disputes is not very considerably less in 1915 than in the preceding year, yet the loss of working days has been but 2,969,700 as compared with 10,111,337. These are the main industrial economic features of this year of war, and we will now consider their bearing on the building trade.

The figures available in the *Labour Gazette* are by no means exhaustive in the case of the building trade, as they refer principally only to carpenters and plumbers, but nevertheless they afford some indication of conditions in the trade. In 1914 134,000 men had their rates of wages changed, with the net result of a gain of £13,600 a week. In 1915 110,000 workpeople had their rates of wages changed, with a nearly similar result, the weekly gain being £13,900. The latter figures would represent about 2s. 6d. increase a head per week. This is, of course, exclusive of overtime. The statistics as to unemployment do not give much idea of the real state of the trade, as so many men have enlisted or gone to other work that there is a shortage of labour. The carpenters and plumbers at the end of the year had 1·6 per cent. unemployed, or 0·5 per cent. less than a year ago. "Insured" workmen had 2·8 unemployed, or 2·7 per cent. less than a year ago.

As regards disputes, 1915 was a peaceful year compared with its predecessor, which witnessed the great dispute in London which lasted all but seven months. The loss of working days was 129,600 as compared with 3,199,426.

We do not know what the rates of wages in Germany have been during the course of the war, but the German trade unions give some returns as to unemployment, and in November they show 4·4 per cent. unemployed amongst building trade operatives and 6·3 per cent. amongst painters.

Building is one of the first trades to suffer in a great war, and we can only be thankful that things are as well as they are. The trade is prepared to endure the hardships of war in order to see a really satisfactory conclusion and to attain a peace founded on really solid foundations; but it is to be hoped that the horrors of war will not be added to by the horrors of hasty and partial legislation which may add to its difficulties for no adequate reason.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The T.C. has passed the following plans:—Two dwelling-houses, Orchard-street, for Messrs. Joseph Shirras & Son, builders; addition to engineering works, King-street-place, for Messrs. John M. Henderson & Co., engineers; addition to comb works, Hutcheon-street, for the Aberdeen Comb Works Company, Ltd., per Mr. William Boice, engineer.

Aberystwyth.—The T.C. has approved plans of a building in Castle-street, submitted by Mr. H. H. Davies, Pier-street, and of alterations to the Old Bank premises in Pier-street, by the City Brewery Company, and to 37, Terrace-road, by Messrs. T. Ellis & Co.

Barnes.—Plans approved by the D.C.:—Four houses, Vine-road, Mr. Ernest Bates; four houses, Westwood-road, Barnes, Mr. Ernest Bates; and one house, Percival-road, Mortlake, Mr. Ernest Gale.

Bedford.—Plans passed by the T.C.:—Temporary extensions to aeroplane engine shop, Queen's Engineering Works, for Messrs. W. H. Allen, Son, & Co., Ltd.; storeroom, County Theatre, Midland-road, for the County Theatre; temporary meter house, Hurst-grove, for Messrs. W. H. Allen, Son, & Co., Ltd.

Bexhill.—The Council has accepted a tender for erecting an observation pavilion for the new isolation hospital at £757 6s. 3d.

Bradford.—The committee engaged in providing additional hospital accommodation in Bradford for wounded soldiers has adopted a scheme to increase the accommodation at the War Hospital.

Bradwell (Staffs).—The Staffordshire C.C. has approved an estimate of £1,000 in respect of an advance by way of additional loan to the Bradwell Joint Hospital Committee in respect of additions and alterations to the Bradwell Isolation Hospital, subject to the L.G.B.'s sanction.

Cardiff.—A scheme for the extension of the King Edward VII. Hospital at Cardiff was under consideration at a recent meeting of the board of management. It is estimated that the whole scheme would cost £46,506 for building.

Colombia.—The *Diario Oficial* (Bogotá) of November 16 publishes a law granting 30,000 hectares (about 74,100 acres) of land to the Municipality of Ipiales, in the Department of Nariño. The Municipality will sell this land in lots by public tender and the proceeds of the sale will be devoted to the construction and equipment of a hospital in the town of Ipiales. The plans of the work must be presented to the Colombian Ministry of Public Works for approval.

Cootehill (County Cavan).—The people of Cootehill have decided upon the erection of a new Catholic church.

Darlington.—The R.D.C. has approved a plan for a proposed temporary shed at Geneva Works, for Mr. J. F. Wake; also plan for a house Heighington, for Mr. F. Dresser.

Dartmouth.—The contract for the erection o wing to the Royal Naval College, Dartmou has been placed with Messrs. G. E. Wallis Sons, Ltd., of Maidstone. The work will started without delay.

Denby and Cumberworth.—The U.D.C. approved plans for a mechanics' shop at H cliffe Mills, and the conversion of dwelling-ho into a butcher's sale shop for the Scissett operative Society at Denby Dale.

Droitwich.—Plans are before the T.C. for extension and improvement of the grou adjoining St. Andrew's Brine Baths and wid ing the thoroughfare

Dublin.—The L.G.B. has held an inquiry i an application made by the South Dublin R for sanction to a supplemental loan of £10,000 connection with the Labourers Acts. The Bo agreed to sanction a loan of £31,110, being at rate of £170 per cottage.

Epsom.—Plans approved by the U.D.C. Messrs. Seth Smith & Munro, for the Ch Estate, two houses to be built at West H avenue; Mr. E. Stredwick, for the Chase Esta two pairs of cottages to be built at Upper Cou road.

Greenock.—Greenock Dean of Guild Court granted Messrs. John Walker & Co., su refiners, Princes-street, warrant for the erect of a building to be used as an extension of th cartage platforms and as a sugar store.

Harrogate.—Plans approved by the T.C.:— F. and Miss Vevers' plan for alterations to N 10 and 10A, James-street; Messrs. Shaw & C plan for alterations to premises at the rear shop in James-street.; Messrs. Lawrence & H Ltd., plan for alterations to stabling for fur ture repository in Back Skipton-road; Mr. Hamilton Brown's plan for garage in Corn close, Langcliffe-avenue; Mr. A. Hymas's p for a pair of villas in the Grove, Park Pl Estate.

Hilderstone (Staffs).—The Staffordshire C has adopted an amended scheme for the adap tion and division of the Wooliscroft Far Hilderstone, into small holdings, subject to approval of the Board of Agriculture a Fisheries.

Huddersfield.—At a recent meeting of the T the Borough Engineer submitted map showi the laying out of town-planning schemes A, and C proposed, also map in connection the with. It was resolved that the Borough Engin prepare and submit map showing area inclusion in the supplemental town-planni scheme.

Irlam.—At a recent meeting of the U.D.C. Surveyor submitted amended plans and es mates of proposed improvements at the sewa farm, and these having been fully considered, was resolved on their adoption, at a cost £15,240.

London.—The L.C.C. has sanctioned expen ture of £58 5s. 8d. for laying wood block floor at the Effra-parade School (Norwood), and £230 for strengthening a wall at the Ne inger School (Bermondsey). It has approv plans submitted by the managers of the Paul's C.E. non-provided school (Mile End) carrying out alterations to the premises, a plans submitted by the managers of the Michael's R.C. School (Paddington S.) alterations and improvements to the premis and by the managers of the Westmoreland-r R.C. School (Paddington S.) for improving a enlarging the premises. The Council authorised the execution, at the cost specif in each case, of the undermentioned minor wo at fire-stations:—Provision of wicket gates the appliance-room doors at the Whitechap Great Marlborough-street, Holborn, and Kent Town Stations (£49); provision of new boil for heating apparatus at the Fulham Kingsland Stations (£101); alterations to run-out at the Woolwich Station and to heads of doors at the Bishopsgate and Gr Marlborough-street Stations (£40); repairs appliance-room doors at the Whitecha Station (£19); strengthening the appliar room floors at the Great Marlborough-street Holborn Stations (£220). The Council has a approved drawings showing the arrangements the undermentioned premises proposed to erected or adapted for use for public enterta ments, and for which licences for music cinematograph exhibitions have been or will applied for:—98, Commercial-road (re-appro of drawings of proposed cinematograph ha Fulham Hippodrome, 443 and 444, Fulham-r (re-approval of drawings); 2-6, Kenning Park-road (re-approval of drawings of propo cinematograph hall); Kingsley Hall, Botol road, Poplar; Lower-road and Albion-str Rotherhithe (proposed cinematograph ha Maison Lyons, Shaftesbury-avenue; Str (Tivoli site), Army Recruiting War Pict Exhibition; Wimbledon Park-road and bright-road, Southfields (revised drawings proposed cinematograph hall). It is proposed Hornsey, Wood Green, and Finchley authori to acquire the buildings in Oakfield-road wh were formerly used as a girls' school and ad them for the education of children under Mentally Defective Act.

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* See also our list of Competitions, Contracts, etc., on page 95.

ssett.—Plans passed by the T.C.:—Conver- of cottages into warehouse in Spa-lane, for ssrs. Fawcett & Co.; dwelling-house in New- et, off Manor-road, for Mr. A. F. Peace.

ortobello.—The Edinburgh T.C. has approved the plans for the new power station at tobello.

amsgate.—Plan approved by the T.C.:— ise in Margate-road, owner, Mr. Geo. Griggs; bles and piggeries at Northwood, owner, Mr. . Griggs; belfry at St. Paul's Church, King- et, owners, vicar, etc. The T.C. is to make lication to the L.G.B. for sanction to borrow sum of £413 10s. 4d., further expenditure in nection with the building and equipment of Ellington Council School.

ichmond (Surrey).—The Corporation has roved of plan for additions to No. 8, Lichfield- d, Mrs. Lowe.

ichmond (Yorks).—The R.D.C. has passed ns for a new cinema at Hipswell Camp.

ushden.—The Council has passed plans pre- ted by Messrs. Selwood & Co. for corrugated- shed to cover gas plant at their factory in borough-road; Mr. J. Miller, amended plan wing different site for workshop at rear of se proposed to be erected in Victoria-road.

outhend.—Plans passed by the T.C.:— age, Ailsa-road, Mr. A. J. Tucker; addi- , 101, Queen's-road, Mrs. Smith; one house, ctric-avenue, Mr. T. J. Dennis; conversion of ble into bakery, 43, Sutton-road, Mr. W. y; bungalow, Leigh Hall-road, Mr. H. dge; conversion of one house into two, new er-closet, and staircase, The Broadway, gh, Mr. S. Hicks; rebuilding house, West- d, Mrs. James; bungalow, Chalkwell Park- e, Major W. A. Mackie; bungalow, Blenheim- cent, Mr. S. Sharp.

pain.—The *Gaceta de Madrid* of January 10 fies that tenders will be received at the irección General de Obras Públicas, isterio de Fomento," Madrid, up to ruary 3, for the construction of an embank- t on the sea front at the port of Corunna, n estimated cost of 1,498,335 pesetas (about 900). The same issue of the *Gaceta* notifies tenders will be opened by the Municipal horities at Vallmoll, on February 12, for the truction of a school building at that town n estimated cost of 89,548 pesetas (about 00).

urrey.—At a recent meeting of the Surrey it was reported that arrangements are in ress for the provision of tuberculosis dispen- es at Kingston and Wimbledon.

eymouth.—Plans passed by the T.C.:—The ton Estate, for the erection of a new shop t in St. Andrew's-square; Mr. A. J. Bennett, posed new petrol store in yard of County age, for Messrs. Tilley & Son; Messrs. & Cox, for new shop front at 38, Abbots- -road, Westham, for Mr. A. J. Digby; Mr. Jackson, for semi-detached maisonnettes, e-road; Mr. S. Jackson, for new drainage at side, Wyke-road; Mr. S. Froom, for cartshed, Mr. Trask, Abbotsbury-road.

ombwell.—A plan for a cottage for Mr. ur Naylor, in Summer-lane, has been roved by the U.D.C.

rmouth.—The T.C. has approved a plan for house at the A.B.C. Wharf, Southgates- , for Messrs. Newhouse, Ltd.

ENERAL BUILDING NEWS.

TECHNICAL SCHOOL, HITCHIN.

e new Hitchin Technical School, of which Walter Millard was the architect, has been ed at the rear of the old Town Hall in d-street, and incorporated into the older ling. It is now open for the reception of ls. The cost of erection is £3,325. A fireproof staircase directly faces the main nce, at the summit of which is a spacious ng with lantern light and windows. The entrance hall has been laid in teak. At the rear of the ground floor means are provided for the study of carpentry, metal and other manual work, and also for cookery and housewifery. The two first-floor classrooms are capable of being thrown into one and utilised as a lecture-hall or for the purposes of a large class. A smaller room on the same floor is to be used as a teacher's room. The school is lighted throughout by means of electricity, with emergency gas jets, and is heated by radiators. Ventilation is provided by swing casements and hoppers. The floors are of wood blocks or cement, and the walls are colour-washed. Messrs. J. Willmott & Sons were the general contractors for the work. Various parts of the work were carried out by Messrs. Gatward & Sons, Ltd., and Messrs. J. Smallwood & Co. The classrooms were furnished by the Educational Supply Association, and the carpentry school under the direction of Mr. R. R. Bunn, of the St. Albans Technical School.

SAILORS' HOME, AVONMOUTH.

The new Sailors' Rest and Home, Meadow-street, Avonmouth, has recently been opened by the Lord Mayor of Bristol and the Lady Mayoress. The premises have a prominent southerly aspect in Meadow-street, and the entrance lobby leads direct to a spacious restaurant and sitting-room. At the far end is the kitchen and serving department, with storage and pantry accommodation. On the first floor are fifteen cubicles arranged round the dormitory. The work has been carried out by Mr. Longden. The architects are Messrs. La Trobe & Weston.

TRADE NEWS.

Boyle's latest patent "air-pump" ventilators have been adopted for the pump-room and mechanics' workshop at Meadow-lane Gas Works for the City of Leeds Gas Department.

The Dufftown Isolation Hospital is being supplied with Shorland's warm air ventilating patent Manchester stoves by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Messrs. Kerner-Greenwood & Co. have sent us particulars of a test with Pudlo which has been carried out by the Japanese Imperial Government. A diagram sent to us shows that by comparison with a Japanese, German, and American waterproofer Pudloed cement with 2 of sand and also 3 of sand is more waterproof than the others in a neat cement mixture. The fact that Pudloed cement is able to carry two or three times its bulk in sand is certainly worthy of consideration, even if only from an economical standpoint. We should state that a waterproofer in powder form helps towards the ultimate success of the work owing to its stable nature, and also because the ingredients with which it is mixed are granular, thus ensuring a thorough mixture. There can also be no evaporation and no loss of strength. In fact, Pudlo actually improves with age. Pudlo is entirely British in composition, and is manufactured and sold in this country.

THE LONDON COUNTY COUNCIL.

THE first meeting of the London County Council after the Christmas recess was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Cyril Jackson, Chairman, presiding.

Loan.—Sanction was given to the borrowing by the Hackney Borough Council of £3,000 for contribution towards cost of street improvements.

Elementary School, Croydon.—The Croydon Local Education Authority have notified the Education Committee of their intention to provide a new public elementary school for about 200 children in the neighbourhood of Broad-green, Croydon.

Eleventh Asylum.—It was reported by the Asylums and Mental Deficiency Committee that in consequence of representations from the Finance Committee H.M. Treasury have intimated that they are not prepared to approve of the continuance of expenditure for the erection of the Eleventh Asylum, and the Committee have taken steps to stop work on the buildings as early as possible.

New County Hall.—The Establishment Committee reported that they had authorised the settlement at £1,650 and £6,000 of claims of Messrs. Holloway Brothers, Ltd., in respect of certain machinery, etc., in their premises on the site of the new County Hall. The Committee have arranged for the sale of the machinery in question. The Committee have approved a proposal for the extension, at an estimated cost of £1,500, of the return of the river wall some distance further behind the existing river front than was contemplated, and have arranged for the work to be executed by Messrs. Morrison & Mason, Ltd., the contractors for the river wall extension, as an extra on their contract.

Alterations at Existing Places of Public Entertainment.—The Theatres and Music Halls Committee have approved arrangements with respect to the undermentioned premises:—75, Balham High-road—alterations to operating, etc., enclosures, provision of tea-room; Bear-street, Leicester-square (Cinema de Paris)—alterations in the ventilating arrangements, formation of draught lobby; 326, Bethnal Green-road—rearrangement of lavatory accommodation and ventilation; 54-55, Blackfriars-road—rearrangement of seating; Broadway Theatre, Deptford—conversion of theatre for use for cinematograph entertainments; 105-107, Charing Cross-road—alterations; Coldharbour-lane, Brixton (Electric Pavilion)—provision of landing at head of north-east exit steps; 17, Crawford-place, Marylebone—ventilation arrangements; 192-196, East India Dock-road—ventilation arrangements; 280, Edgware-road—provision of draught doors in vestibule and corridors; Empire Theatre of Varieties, Leicester-square—provision of temporary cinematograph enclosure; 17-19, Great Windmill-street—alterations; Grove Vale, East Dulwich (Imperial Hall) — alterations; High-street, Clapham (Electric Pavilion)—alterations; 133, High-street, Deptford—alterations in ventilation of cinematograph enclosures and formation of

ROOFTITE

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SPENCER HOUSE, 4, SOUTH PLACE, LONDON, E.C. (Established, Bunhill Row, London, 1833.)

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Brick-layers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	8¾	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8¾	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10	10	10	8½	7½	7½	7½
Leicester	10¼	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10	9	8	8	8
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9	9	9	9	9	9	8	6½	6½	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9½	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	10½	10	10	10½	9½	10	9¼	6	6½	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6¼
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

staff-room; 315-317, Kennington-road—p vision of lavatory for women; 197, Kent Town-road—rearrangement of seating; 4 Kingsland-road—alterations to seating; 5 Kingsland-road—sanitary arrangements; Kin Hall, High-street, Tooting—construction proscenium; 148-150, King's-road, Chelse provision of windows for lighting the hall natural means and of ventilating fans, et Lewisham High-road (Lewisham Cinema arrangement of seating; Lewisham Hip drome—provision of additional dressing-ro accommodation; Lyceum Theatre—rec struction of stage skylight; New Gall Kinema, 121A, Regent-street—alterations; N Grand Theatre of Varieties, Clapham— arrangement of seating at area level; 260-2 North End-road—rearrangement of seati etc., alterations to electrical installation, ven lating arrangements for operating enclosu 1 and 2, Osborn-place, Whitechapel— construction and extension of cinematogra hall; Playhouse, Northumberland-avenu alterations to orchestra space and enlargem of band-room; 191, Portobello-road—provis of windows for providing means of natu lighting and of ventilating fans, etc.; Prem land, Backchurch-lane—heating installatio Putney Bridge-approach (Putney Bri Kinema)—additions and alterations; Que street and Bridge-road, Hammersmith (Bro way Cinema)—additional ventilation arran ments; Royal Victoria Hall, Waterloo-r —provision of doors between the hall a the adjoining coffee tavern; St. Jam Theatre—provision of temporary cinematogra enclosure; St. Martin's Theatre, West-str Shaftesbury-avenue—installation of scene raising and lowering gear, fire curtain, fire ma and hydrants, ventilating arrangements, et Shaftesbury Theatre—alterations; 169-1 Upper Richmond-road (Putney Elec Palace)—alterations in the ventilating arran ments; 164, Uxbridge-road — alterations operating enclosure and pay-box electrical a gas installations; 221, West Ferry-roa provision of additional seating at the rear of south block of seating.

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NEW COMPANIES.

THE undermentioned particulars of n companies recently registered are taken f the Daily Register compiled by Messrs. Jor & Sons, Ltd., Company Registration Age Chancery-lane, W.C.:—

J. S. BRIGGS & SONS, LTD. (142,5 Registered January 1. To acquire, take o and carry on business hitherto carried by J. S. Briggs & Sons, at Fairweather Gr Bradford, and to carry on business of produc manufacturers, sellers of bricks, tiles, co coke, ironstone, clay and other mineral s stances, mechanical engineers, builders, c tractors, etc. Nominal capital, £6,000 6,000 £1 Ordinary shares.

ANGLITE, LTD. (142,677). Registe January 11. To carry on business of engine chemists, merchants, exporters, quarriers quarry masters, mine owners, builders, prop owners, contractors, etc. Nominal capi £5,000 in 4,500 £1 preferential Ordinary sha and 10,000 1s. Deferred shares.

◆

WAGES IN THE BUILDING TRAD

Nottingham.—The Nottingham Build Trades Conciliation Board met on January to hear applications from the bricklaye joiners', masons', and builders' labourers an advance of wages on account of the increa cost of living caused by the war. After consideration the following resolution agreed to:—"That the bricklayers', join and stonemasons' wages be increased January 22, 1916, to 10½d. per hour, wit further increase of ½d. per hour to take effec April 1, 1916, and to terminate three mon after the declaration of peace, the wages t to be 10½d. per hour. That the build labourers' wages be increased on January 1916, to 8d. per hour, with a further incr of ½d. per hour to take effect on April 1, 1 and to terminate three months after declaration of peace, the wages then to be per hour."

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi.,; Public Appointments, —; Auction Sales, xx. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each ragraph is the latest date when the tender, or names of those willing to submit tenders, ay be sent in.

ANUARY 29.—**Skewen (Glam).**—CONVERSION. For the conversion of Drymma House, ewen, near Neath, into a Home for Feeble-nded Persons, for the Glamorganshire Joint or Law Establishment Committee. Plans, ., may be seen either at the Drymma House, at Mr. Thomas Roderick's office, architect, hbrook House, Aberdare.

ANUARY 31.—**Ripon.**—ADDITIONS.—Erection of ditions to the Spa Baths, Park-street, for the rporation. Plans, etc., of the City Surveyor.

ANUARY 31.— **Whitlocksworthy.** — REPAIRS, .—For repairs, etc., to farm buildings at hitlocksworthy, S. Milton, near Kingsbridge. rticulars, etc., of Messrs. Bourne & Sons, d agents, Totnes.

EBRUARY 2.—**Cardiff.**—ALTERATIONS, ETC.—For e erection and construction of alterations and ditions at the Cardiff Sanatorium, and additions at the Cardiff Sanatorium, Canton, Cardiff. the Cardiff City Council. Contract drawgs, specifications, etc., at the City Engineer's ices, City Hall, Cardiff.

EBRUARY 10.—**Manchester.**—POWER-HOUSE.— r the work and materials required in the ction of a power-house at their Bradford-d Station, for the Gas Committee. Specition, etc., of Mr. Fredk. A. Price, Superendent, Gas Department, Town Hall, Manster. Deposit, £1 1s. Drawings may be n, the site inspected, and any other informan obtained on application to the engineer. . J. G. Newbigging, M.Inst.C.E., at his office, chdale-road Gasworks.

EBRUARY 15.—**Guildford.**—RETAINING WALL.— ection of a retaining wall for the support of highway in Quarry-street, Guildford, the struction to be either in mass concrete or nforced concrete on the Kahn system, for T.C. Plans, etc., on application to Mr. E. ing Harrison, A.M.Inst.C.E., Borough gineer and Surveyor. Deposit, £2 2s.

o DATE.— **Penryn.** — ROOF REPAIRS.— For ensive repairs to roof at Penryn. Particus of Messrs. M. A. Hearle & Co., Penryn.

FURNITURE, MATERIALS, etc.

ANUARY 29. — **Birmingham.** — BUILDERS' TERIALS.—Supply to the Public Works Comtee of builders' materials for one year, end- March 31, 1917. Forms of tender, etc., at City Surveyor's Office, Council House, Birgham. Deposit, £1.

ANUARY 29.—**Llandaff.**—BUILDERS' MATERIALS. upply to the Llandaff and Dinas Powis .C. of builders' materials. Forms of tender the Suveyor, Mr. James Holden, I.Inst.C.E., 20, Park-place, Cardiff.

ANUARY 31.—**Stowmarket.**—TAR.—Supply to U.D.C. of refined tar for the year. Particufrom Mr. G. W. Lingwood, Surveyor to the ncil, Butter Market, Stowmarket.

EBRUARY 2.—**London.**—BUILDERS' MATERIALS. upply to the Council of the Royal Borough Kensington of builders' materials, etc., for or twelve months, commencing on April 1, . Forms of tender of Mr. Wm. Chambers te, Town Clerk, Town Hall, Kensington, W.

EBRUARY 2.—**Tring.**—BROKEN GRANITE, ETC. upply to the U.D.C. for the year ending rch 31, 1917, of broken granite, chippings, ts, hoggin, blast furnace slag, refined tar. ms of tender, etc., of Mr S. S. Gettings, I.Inst.C.E., Surveyor, Surveyor's Office, ng.

EBRUARY 4.—**Grimsby.**—BUILDERS' MATERIALS. upply to the Corporation of builders' erials between April 1, 1916, and March 31, 1917. Specification, etc., of Mr. H. Gilbert Whyatt, M.Inst.C.E., Borough Engineer and Surveyor, Municipal Buildings, 170, Victoria-street, Grimsby.

FEBRUARY 5.—**Wigan.**—BUILDERS' MATERIALS.— Supply to the Tramways Committee of builders' materials for the year ending March 31, 1917. Specifications, etc., of Mr. Frank Buckley, General Manager, Corporation Tramways, Market-place, Wigan.

FEBRUARY 7.—**Cardiff.**—BUILDERS' MATERIALS. —Supply to the Corporation of builders' materials for the period of six months from April 1, 1916. Specifications, etc., at the office of the City Engineer, City Hall, Cardiff.

FEBRUARY 7.—**Hendon.**—BUILDING MATERIALS, ETC.—Supply to the U.D.C. of building materials, etc., for one year from April 1, 1916. Specifications, etc., of Mr. S. Slater Grimley, M.Inst.C.E., Engineer and Surveyor to the Council, Council Offices, Hendon, N.W.

FEBRUARY 7.—**Little Hulton.**—GRANITE, ETC.— Supply to the U.D.C. of broken granite, 4 by 5 granite setts, granite, limestone, and slag chippings, grit kerbs, stoneware pipes and gullies, cement, etc. Forms of tender of Mr. James H. Heyes, Clerk, Council Offices, Little Hulton, near Bolton.

FEBRUARY 7. — **Maldens and Coombe.** — BUILDERS' MATERIALS.—Supply to the U.D.C. of builders' materials, etc. Forms of tender, etc., upon application at the Clerk's Department, Council Offices, New Malden.

FEBRUARY 8. — **Birmingham.** — BUILDERS' MATERIALS.—Supply to the Birmingham Tame and Rea District Drainage Board of builders' materials for one year ended March 31, 1917. General conditions, etc., of Mr. John D. Watson, M.Inst.C.E., Engineer to the Board, Engineer's Office, Tyburn, Birmingham.

FEBRUARY 8. — **Cheshunt.** — BUILDERS' MATERIALS.—Supply to the U.D.C. of builders' materials, etc., during the twelve months ending March 31, 1917. Specifications, etc., of Mr. J. E. Sharpe, Engineer and Surveyor, Manor House, Cheshunt.

FEBRUARY 9.—**Bradford.**—ROAD METAL, ETC.— Supply to the Corporation of road metal, cement, pitch and oil required for street paving purposes, cast-iron gullies, ventilators, and storm grates, glazed earthenware pipes, blocks, and junctions, timber for sewerage and other works. Forms of tender, etc., of Mr. W. H. S. Dawson, City Engineer and Surveyor, Town Hall.

FEBRUARY 12. — **Ossett.** — MATERIALS, ETC. — Supply to the Corporation of materials, stores, workmen's tools, etc., required in the Highways, Gas, Lighting, Water, Sanitary, and Educational Departments for one year from April 1, 1916, to March 31, 1917. Specifications, etc., at the Borough Surveyor's Office.

FEBRUARY 14. — **Cheltenham.** — BUILDERS' MATERIALS. — Supply to the B.C. of builders' materials for the year ending March 31, 1917. Form of tender of Mr. J. S. Pickering, Borough Engineer, Municipal Offices, Cheltenham.

FEBRUARY 14.—**Halifax.**—BUILDERS' MATERIALS. —Supply to the Corporation of builders' materials during the twelve months ending March 31, 1917. Forms of tender, etc., from the Tramways Engineer, Tramways Office, Skircoat-road, Halifax.

FEBRUARY 14.—**Halifax.**—TIMBER, ETC.—Supply to the Corporation of timber, ironmongery, including hacksaw blades, screws, etc., iron castings, tubes and fittings, etc. Forms of tender, etc., at the Office, Electricity Department, Foundry-street, Halifax.

FEBRUARY 14.—**Plomesgate.**—GRANITE, ETC.— Supply to the R.D.C. of about 3,300 tons of broken granite and 2,200 tons of flint, broken or unbroken. Forms of tender of Mr. David R. Read, Clerk, Board Room, Wickham Market.

FEBRUARY 14. — **Richmond (Surrey).** — BUILDERS' MATERIALS.—Supply to the T.C. of builders' materials, etc. Form of tender of Mr. J. H. Brierley, Borough Surveyor, Town Hall, Richmond, Surrey.

FEBRUARY 19.—**Manchester.**—LIME.—Supply to the Rivers Committee, extending over a period of twelve months from April 1 next, of lime (120 tons). Specifications, etc., of the Secretary of the Rivers Department, Town Hall, Manchester.

FEBRUARY 19.—**Stafford.**—BUILDERS' MATERIALS. —Supply to the Corporation of builders' materials from April 1 next to March 31, 1917. Forms of tender of Mr. W. Plant, A.M.Inst.C.E., Borough Engineer, Borough Hall, Stafford. Deposit, 5s.

* FEBRUARY 21.—**Not Stated.**—ROAD MATERIAL. —The Commissioners of H.M. Works and Public Buildings invite tenders for supply of road materials for one year.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 1.—**Castleblaney.**—CHIMNEY SHAFT. —For the erection of a brick chimney shaft at Fane Valley Creamery, Altnamackin, Castleblaney. Plan and specification can be seen and copied at the Creamery. Mr. J. M'Neill, Manager.

FEBRUARY 14. — **Birkenhead.**—HEATING, ETC., PLANT.—For the supply, delivery, and erection at the Union Institution and Infirmary, Derby-road, Tranmere, Birkenhead, of a complete centralised heating and hot water supply plant, together with mains, connections, and accessories, for the Guardians. Forms of tender, etc., of the Consulting Engineers, Messrs. Sloan & Lloyd Barnes, M.I.Mech.E., 34, Castle-street, Liverpool. Deposit, £2 2s.

ROAD, SANITARY, AND WATER WORKS.

JANUARY 29.—**Birmingham.**—GRANITE KERBS, ETC.—Supply to the Public Works Committee of materials for one year ending March 31, 1917, viz.:—Granite kerbs, setts, crossing stones, chippings, flags, paving bricks, wood-paving blocks, ragstone, limestone, tarred limestone, tarred roadstone, gravel, sand, and slag. Forms of tender, etc., at the City Surveyor's Office, Council House, Birmingham. Deposit, £1.

JANUARY 29.—**Rotherham.**—SEWER.—For the laying of about 700 lineal yds. of 9-in. earthenware pipe sewer from Wentworth-road to Barnsley-road, Thorpe Hesley, in the parishes of Wentworth and Rotherham, for the R.D.C. Specifications, etc., at the office of the Council's Engineer, Mr. B. Hey, Imperial Buildings, Rotherham.

JANUARY 29.—**Woodmansterne.**—LAVATORIES, ETC.—Fitting up new lavatories and water-closets, and works of drainage, new boiler and gas fittings, and minor repairs to adapt the Oaks at Woodmansterne for occupation, for the Surrey Joint Poor Law Committee. Drawings, etc., of Mr. Robert M. Chart, F.S.I., Union Bank-chambers, Croydon. Deposit, 10s.

JANUARY 31.—**Desborough.**—BROKEN GRANITE, ETC.—Supply to the U.D.C. of broken granite, slag, gravel, sanitary pipes, etc. blue bricks and paviors, Portland cement. Forms of tender, etc., of Mr. T. F. Parker, Deputy Surveyor, Council Offices, Desborough.

JANUARY 31.—**Dundee.**—EXCAVATION WORK, ETC.—For excavation work, banking, drainage, road-making, etc., to form an extension to the Western Necropolis on south side, for the T.C. Burial Board. Specifications at the Parks and Cemeteries Office, 93, Commercial-street.

JANUARY 31.—**Naas.**—WATER MAIN.—For relaying water main over Ballymanny Hill, for the Naas No. 1 R.D.C. Plan, etc., of Mr. D. J. Purcell, Clerk of Council, Naas

JANUARY 31.— **Northamptonshire.** — BROKEN GRANITE, ETC.—Supply to the Northamptonshire C.C. of broken granite, tar macadam, and slag for the year ending March 31, 1917. Forms of tender of Mr. C .S. Morris, County Surveyor, County Hall, Northampton.

[Those with an asterisk (*) are advertised in this issue.]

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 31.—**South Stoneham.**—MACADAM.—Supply to the R.D.C. of British macadam. Forms of tender may be obtained of Mr. E. Wynter Cross, Clerk, The Workhouse, West End, near Southampton, or of the District Surveyor, Mr. F. Heather, "Chevin Side," Old Portswood, Southampton. Stamped addressed envelopes to be enclosed with all applications for forms.

FEBRUARY 2.—**Middlesex.**—BASALT, ETC.—Supply to the C.C. of about 7,500 tons of 2-in. and 1½-in. hand-broken basalt for road construction, and 500 tons of ⅜-in. clean chippings. Specification, etc., of Mr. H. T. Wakelam, County Engineer, County Engineer's Office, Middlesex Guildhall, Westminster, S.W.

FEBRUARY 2.—**Middlesex.**—CHIPPINGS.—Supply to the C.C. of about 2,000 tons of Blue Guernsey or Leicestershire clean chippings, for use in connection with tar painting work. Specification, etc., of Mr. H. T. Wakelam, County Engineer, County Engineer's Office, Middlesex Guildhall, Westminster, S.W.

FEBRUARY 2.—**Portsmouth.**—PIPES, ETC., AND STREET WORKS.—For twelve months' supply of stores, etc., to the Corporation from April 1 next, as follows:—Stoneware pipes, castings, street work (excavating for cables, laying pipes, etc.), ironmongery, brushes, and sundries. Forms of tender, etc., can only be obtained at the Electric Lighting Station, Gunwharf-road, Portsmouth.

FEBRUARY 2.—**Renfrew.**—METAL FOR ROADS, ETC.—Supply to the Renfrew First or Upper District of metal for roads for the year from May 15 next; also for borders, setts, and chippings. Specifications, etc., of Mr. James A. M'Callum, District Clerk, 15, West George-street, Glasgow; or Mr. Robert Drummond, Road Surveyor, Fairfield, Paisley.

FEBRUARY 4.—**Essex.**—GRANITE.—Supply to the Essex C.C. of granite for the repair of the main roads for the financial year ending March 31, 1917. Schedules and forms of the County Surveyor, Chelmsford.

FEBRUARY 5.—**Alvaston and Boulton.**—GRANITE.—Supply to the U.D.C. of 150 tons 2½-in. granite, 50 tons of 1½-in. granite. Forms of tender of Mr. Wm. Jno. Holbrook, Clerk to the Council, Alvaston, Derby.

FEBRUARY 5.—**Cuckfield.**—ROAD STONE, ETC.—Supply to the R.D.C. of road stone, roadmen's tools, etc., for the year ending March 31, 1917. Forms of tender, etc., of Mr. A. Macarthur, C.E., Surveyor, Council Offices, Haywards Heath.

FEBRUARY 5.—**Horncastle.**—GRANITE, ETC.—Supply to the R.D.C. of about 4,451 tons of granite (X, XX, and XXX) and about 1,212 tons of slag, etc. (2½ in. and 1¾ in.). Specifications, etc., of Mr. J. E. Chatterton, Clerk, Council Offices, Horncastle.

FEBRUARY 9.—**Bradford.**—CARTAGE OF ROAD METAL.—For the cartage of road metal; also for the team labour required in the cleansing and maintenance of the macadamised roads within the several districts of the city, for the twelve months ending March 31, 1917, for the Corporation. Forms of tender, etc., of Mr. W. H. S. Dawson, City Engineer and Surveyor, Town Hall.

FEBRUARY 9.—**Mullingar.**—SEWER, ETC.—For construction of a sewer and necessary connections thereto, at the Mullingar District Lunatic Asylum. Drawings and specifications prepared by Messrs. Doyle & Loughlin, Civil Engineers, Church-street, Athlone, can be seen at their offices, or at the office of Mr. L. Gavin, Resident Medical Superintendent, Boardroom, Mullingar Asylum.

FEBRUARY 11.—**Bexhill.**—DISTILLED TAR.—Supply to the B.C. of distilled tar, tarvia, other compounds for use in tar-spraying roa during the season of 1916. Mr. T. E. Rodger Town Clerk, Town Hall, Bexhill.

FEBRUARY 14.—**Waltham Holy Cross.**—TA SPRAYING.—For the tar-spraying complete about 50,000 sq. yds. of the roads within the district, for the U.D.C. Forms of tender, wi official envelopes, may be obtained on applic tion to Mr. W. C. Holloway, A.M.Inst.C.E. Engineer and Surveyor, Town Hall, Waltha Abbey, or will be sent through the post upo receipt of a 2d. stamped addresed foolsca envelope.

NO DATE.—**Braintree.**—SEWER.—For layi about 521 yds. of 9-in. glazed stoneware sew at Church Street, Bocking, and the constructi of necessary manholes, etc., for the R.D. Forms of tender, etc., of Messrs. E. H. Brig & C. V. Bright, Surveyors, 17, Railway-stre Braintree.

NO DATE.—**Ellon.**—DRAINS.—For cutting, la ing, and filling-in 350 yds. of a leader drain a 5,140 yds. of furrow drains at North Colehi Ellon. Offers to Mr. Hugh M'Donald, La Steward, Ellon.

Auction Sales.

* FEBRUARY 8.—**Alverstoke.**—Mr. H. W. Smi will sell by auction, on the premises, the sto and plant of a builder and contractor, togeth with wood-working machinery.

* FEBRUARY 9.—Messrs. Churchill & Sim w sell by auction, at the Great Hall, Winchest House, Old Broad-street, E.C., an assortme of deals, battens, boards, timbers, etc.

[Those with an asterisk (*) are advertised in this issue.]

PATENTS.

APPLICATIONS PUBLISHED.*

22,992 of 1914.—John Brown: Device for preventing the shaking of window sashes.

24,721 of 1914.—Louis Rose: Windows.

3 of 1915.—Gerald Dod and The Imperia Company, Ltd.: Grip pipe couplings.

127 of 1915.—Harald Dohrn: Means for lighting theatrical stages and other areas.

145 of 1915.—William Calway.—Pavement kerbs and gutter channels.

797 of 1915.—Spencer Cone Cary: Hoop iron or sheet metal bands.

1,232 of 1915.—Henry Sharrow: Ball taps or ball valves.

1,678 of 1915.—Frederick Arthur Bullivant and George May Selby: Clamping devices for securing together wires, ropes, rods, or the like.

1,718 of 1915.—William Arthur Brookes, John Walter Mason, and John Mason: Stove grates.

1,904 of 1915.—Thomas Richardson: Adaptable fire front to replace bars of register grates and the like.

2,363 of 1915.—Henry Melancthon Pritchard: Building construction.

3,261 of 1915.—Louise Audrey Maurice, executrix of George Maurice, deceased, and Frederick Thomas Cash: Electric-light fittings.

3,911 of 1915.—George Henry Mills: Copper and bath combination.

5,129 of 1915.—Henry Clayton Wood and Wright Hinchcliff Brook: Gully traps.

5,879 of 1915.—Wilson Henry Sturge: Combined electric switch and wall plug.

6,093 of 1915.—Charles James Beaver and Ernest Alexander Claremont: Lead-jointing sleeve for electric joints.

7,941 of 1915.—Edmund Percy Wills: Construction of floors.

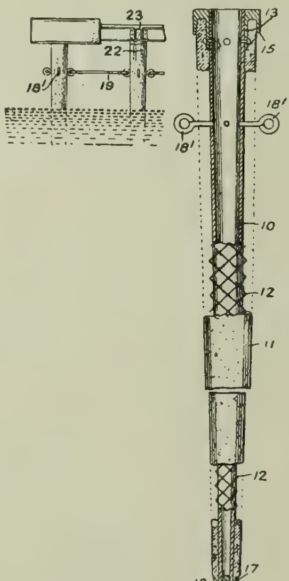
10,356 of 1915.—William Story: Glazing roofs and like structures.

10,384 of 1915.—Moritz Kahn: Metal fabrics for use in ferro-concrete construction.

SELECTED PATENTS.

16,301 of 1914.—Charles Irving Deane: Piles.

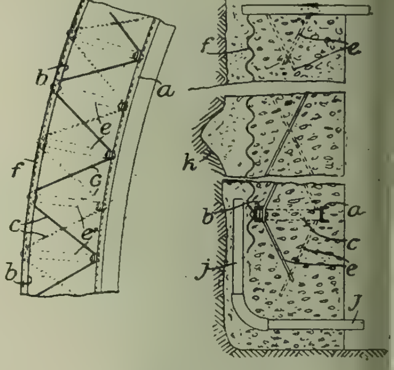
This relates to a concrete pile having a metallic core 10 and provided with a head 13 and shoe 16 permanently fastened to the core. A concrete shell 11 is rigidly attached to the core between the head and shoe, its upper end being enveloped by a flange 15 on the head. Reinforcement 12 may be incorporated in the concrete. The shoe is attached by means of an upstanding threaded stud 18, which is surrounded by a recess 17 formed by a flange on the shoe. Eye-bolts 18¹ screwed into the core serve for the connection of stays and bracing-rods 19. When the pile is to be driven by jetting, the shoe is provided with a central aperture and the core is made hollow. A post 22 may be inserted at the top of the hollow core for the attachment of connections 23.



16,301 of 1914.

16,801 of 1914.—Edmund Lawrence Hann and Christopher Kearton: Wells, shafts, tunnels, etc.

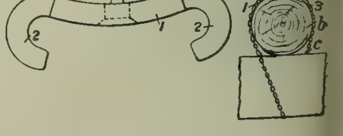
This relates to ferro-concrete lining for wells, shafts, or tunnels, in which the reinforcement consists of a series of ring frames each comprising inner and outer channel-irons *a*, *b* connected by diagonal bracing-members adjacent ring frames being connected togeth by diagonal bracing-members *e*. The fram work is surrounded by a casing *f* built of me segments, the segments being preferal flanged and the abutting flanges weld together. The casing may be corrugat and recesses *k* may be provided in the wall the excavation. Cement is introduced behi the casing *f*, as by means of a pipe *j*.



16,801 of 1914.

17,474 of 1914.—Sydney Eric Asplan Scaffolding.

This relates to a device for use in scaffoldi comprising a plate 1 having a chisel spik on its concave side and two hooks 2 or a h and an eye on the other side. The spik driven into the upright pole *b* and a s chain *c* is passed round the pole and ledger is hooked to the hooks on the plate. The c may be secured at one end to the eye on plate.



17,474 of 1914.

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

ICES CURRENT OF MATERIALS.

wing to the exceptional circumstances which rail at the present time, prices of materials uld be confirmed by inquiry.]

nce our last issue lead prices have been increased several other prices altered.—ED.

Our aim in this list is to give, as far as possible, the age prices of materials, not necessarily the highest owest. Quality and quantity obviously affect prices fact which should be remembered by those who e use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
Stocks	2 0 0
ed Stocks for Facings	2 12 0

Per 1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
ons	1 16 0	Best Blue Pressed	
Fareham		Staffordshire .	3 15 0
ed	3 12 0	Do. Bullnose ..	4 0 0
Red Pressed		Best Stourbridge	
uabon Facing	5 0 0	Fire Bricks ..	4 10 0
ZED BRICKS—			
t White,		D'ble Str'tch'rs	18 10 0
ory, and		Double Headers	15 10 0
lt Glazed		One Side and	
retchers ..	13 0 0	two Ends....	19 10 0
lers	12 10 0	Two Sides and	
ns, Bullnose		one End	20 10 0
d 4½ in.		Splays and	
ats	16 10 0	Squints	18 0 0

Second Quality £1 10s. per 1000 less than best.

	s. d.	
nes Ballast	7 9	per yard, delivered.
nes and Pit Sand	8 0	,, ,, ,,
Washed Sand	9 0	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
Portland Cement	2 5 0	..	2 8 0

. £2 1s. alongside in 80-ton lots.
crete 2s. 6d. per ton extra on above.
Ground Blue Lias Lime.... 1 3 6 at rly. depôt.
E.—The cement or lime is exclusive of the ordinary charge for sacks.
Stone Lime .... 17s. 0d. per yard delivered.
rbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
STONE—delivered in railway trucks at estbourne Park, Paddington, G.W.R., or uth Lambeth, G.W.R., per ft. cube	1 7
do. delivered in Railway trucks at Nine ms, L. & S.W.R., per ft. cube	1 8¾
do. delivered on road waggons, Nine Elms pôt	1 9¼
LAND STONE—	
own Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W., per ft. cube	2 5½
. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube ..	2 6½

hite Basebed, 2d. per ft. cube extra.

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
ster in blocks..	1 11	Red Corsehill in	
in blocks	1 7	blocks	2 6
shill in blocks	2 0	Closeburn Red	
y Dale in		Freestone	2 2
cks	2 6	Red Mansfield	
		Freestone	2 6

STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
pled random blocks	2 10
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landings to sizes (under ft. super.)	2 8
rubbed two sides ditto, ditto	3 2
n. sawn two sides slabs (random sizes)	1 0
to 2½ in. sawn one side slabs (random sizes)	0 8
. to 2 in. ditto, ditto	0 6½
YORK—	
Per Ft. Cube, Delivered at Railway Depôt.	
pled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landing to sizes (under 40 ft. per.)	2 9
rubbed two sides ditto	3 3
sawn two sides slabs (random sizes)	1 2½
self-faced random flags	0 6

TILES.

Per 1000 f.o.r. London.

	£ s. d.
machine-made tiles or hand-made sanded tiles from either Broseley or affordshire district	2 12 6
mental ditto	2 15 0
and valley tiles (per dozen)	0 5 6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£ s. d.
Blue Bangor slates, 20 by 10	11 16 0
quality ,, ,,	11 10 0
, ,, 16 by 8	5 15 0
Blue Portmadoc, 20 by 10	11 13 6
quality ,, ,,	11 3 6
, ,, 16 by 8	5 15 0

WOOD.

BUILDING REDWOOD.

Imported sizes.	Per standard. £ s. d.		£ s d.
s: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	25 0 0	..	26 0 0
n. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	24 0 0	..	25 0 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard. £ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	22 10 0	..	23 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.	
¾ in.	1 0 0		
Seconds: building quality deals, battens, boards, and scantlings	1 0 0	less than best.	
Best Middling Dantzic and Memel Fir Timber Logs (average specification) ..	Per load of 50 ft. cube. 8 10 0	..	—
Seconds do. do.	8 0 0	..	—
9 in. to 10 in. do.	7 0 0	..	—
6 in. to 8 in. do.	6 10 0	..	—
Stocks very limited.			
Sawn pitch pine logs (about 35 cu. ft. average)	Per load. 9 0 0	..	9 10 0
Do. 6 in. to 10 in.	7 0 0	..	7 5 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Rio do.	23 0 0	..	25 0 0
Under 2 in. thick	0 10 0	extra.	
JOINERS' WOOD.			
White Sea Frst Quality Red:			
4 in. by 11 in.	35 0 0	..	36 0 0
3 in. by 11 in., and 2 in. by 11 in.	34 0 0	..	35 0 0
4 in. by 9 in.	33 0 0	..	34 0 0
3 in. by 9 in., and 2½ in. by 9 in.	32 0 0	..	33 0 0
9 in. by 11 in. boards	1 0 0	more than deals.	
7 in. and 8 in. battens	24 0 0	..	25 0 0
7 in. and 8 in. boards	1 0 0	more than battens.	
Seconds quality	2 0 0	less than best.	
Third quality	£2 to £3	less than seconds.	
Archangel White Deals—			
Best 3 in. by 11 in.	28 0 0	..	29 0 0
3 in. by 9 in. and 10 in.	26 0 0	..	27 0 0
Seconds, do.	1 10 0	less than best.	
U.S. Battens	19 10 0	..	20 0 0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—			
1¼ in. by 7 in. planed and shot	Per square actual. 1 5 6	..	1 10 0
1¼ in. by 7 in. planed and matched	1 6 0	..	1 10 0
1 in. by 7 in. planed and shot	1 0 0	..	1 3 0
1 in. by 7 in. planed and matched	1 0 0	..	1 4 6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0 16 0	..	0 17 6
1 in. by 7 in. do.	1 1 0	..	1 3 6
⅝ in. by 7 in. do.	0 13 0	..	0 14 0
6 in. at 6d. per square less than 7 in.			
5 in. and 5½ in. at 6d. per square less than 6 in.			
Columbian or Oregon Pine, best quality	Per standard. 35 0 0	..	40 0 0
Yellow Pine—First, regular sizes	57 0 0	upwards.	
Oddments	39 0 0	,,	
Seconds, regular sizes	43 10 0	,,	
Oddments	37 10 0	,,	
Kauri Pine—Planks per ft. cube	0 7 6	..	—
Oak Logs—			
Large, per ft. cube	0 6 0	..	0 6 6
Small ,, ,, ...	0 5 0	..	0 5 6
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do...	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super, as inch	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut..	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 5 0	..	21 5 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Trees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

METALS (*Continued*).

IRON—	Per ton, in London. £ s. d.		£ s. d.
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality ..	16 10 0	..	17 0 0
Staffordshire "Marked Bars"	17 0 0	..	17 10 0
Mild Steel Bars	16 10 0	..	17 0 0
Steel Bars, Ferro-Concrete quality, £17 10s. basis price.			
Hoop Iron, basis price	17 10 0	..	—
,, ,, Galvanised ..	30 0 0	..	35 0 0
(* And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	18 0 0	..	—
,, ,, 24 g.	19 0 0	..	—
,, ,, 26 g.	20 0 0	..	—
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	29 10 0	..	—
Ordinary sizes to 26 g.	32 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g. ..	30 0 0	..	—
,, ,, 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	28 10 0	..	—
Ordinary sizes, 26 g.	29 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 15 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 0 0	..	—
Best Soft Steel Sheets, 26 g. ..	21 15 0	..	—
Cut Nails, 3 in. to 6 in.	18 10 0	..	19 0 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

LEAD—Sheet, English, 4 lb.	£ s. d.		
and up	37 10 0	..	—
Pipe in coils	38 0 0	..	—
Soil pipe	41 0 0	..	—
Compo pipe	41 0 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£ s. d.		
COPPER—				
Strong Sheet	per lb.	0 1 5	..	—
Thin ,, ...	,,	0 1 6	..	—
Copper nails	,,	0 1 5	..	—
Copper wire	,,	0 1 5	..	—
BRASS—				
Strong Sheet	,,	0 1 3	..	—
Thin	,,	0 1 4	..	—
TIN—English Ingots ..	,,	0 1 10	..	—
SOLDER—Plumbers' ..	,,	0 0 10	..	—
Tinmen's	,,	0 1 0	..	—
Blowpipe	,,	0 1 2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¼d.
,, fourths	6½d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
$\frac{3}{16}$ Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white ..	5d.
Ditto, tinted	6½d.
Rolled Sheet	4d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 9
,, ,, ,, in barrels ..	,,	0 3 10
,, ,, ,, in drums ..	,,	0 4 1
Boiled ,, ,, in barrels ..	,,	0 4 0
,, ,, ,, in drums ..	,,	0 4 4
Turpentine in barrels	,,	0 4 5
,, in drums	,,	0 4 8
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	44 5 0
Red Lead, Dry	per ton	42 10 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	55 15 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

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N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

◆

FOREIGN AND COLONIAL.

Embankment and School Construction, etc., Spain.

The *Gaceta de Madrid* of January 10 notifies that tenders will be received at the "Dirección General de Obras Públicas, Ministerio de Fomento," Madrid, up to February 3, for the construction of an embankment on the sea front at the port of Corunna, at an estimated cost of 1,498,335 pesetas (about £59,900). A period of five years will be allowed for carrying out the works. A deposit of 74,917 pesetas (about £3,000) is required to qualify any tender. Local representation is necessary. Specifications and plans, etc., may be consulted at the above-mentioned "Dirección General" or at the offices of the Civil Government at Corunna. The same issue of the *Gaceta* notifies that tenders will be opened by the municipal authorities at Vallmoll, on February 12, for the construction of a school building at that town at an estimated cost of 89,548 pesetas (about £3,600). Although this contract will probably be awarded to a Spanish firm, nevertheless the carrying out of the works may involve the purchase of some materials outside Spain.

The *Gaceta* of January 13 notifies that sealed tenders will be received by the "Servicio Central Hidráulico, Dirección General de Obras Públicas, Ministerio de Fomento," Madrid, up to 1 p.m. on February 4, for the supply and delivery of 1,500 metric tons of cement required in connection with the Agujero drainage works. A deposit of 2,000 pesetas (about £80) is required to qualify any tender. Local representation is necessary. Further particulars (in Spanish) may be consulted by United Kingdom cement manufacturers at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C., where also may be seen the general specifications and conditions of tender issued by the "Ministerio de Fomento" for the supply of cement required for public works in Spain.

◆

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday*. [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

BEXHILL.—For erection of an observation pavilion at the new Isolation Hospital, for the Town Council:—

Shannon*	£757

GREAT YARMOUTH.—For reslating roof of the Central Fish Market, for the Yarmouth Port and Haven Commissioners:—

Carter & Wright*	£150

LONDON.—For installing electric lighting apparatus required at the new fire-station which is being erected at West Norwood, for the London County Council:—

W. C. Tackley & Co., Ltd.*	£207

LONDON.—For painting work in connection with the remodelling of Star-lane School, Fulham, S.W., for the London County Council:—

Bovis, Ltd.	£1,125	0	0
McCormick & Sons, Ltd.	1,082	0	0
Maxwell Bros., Ltd.	938	0	0
J. & C. Bowyer, Ltd.	916	0	0
J. Garrett & Son	829	0	0
W. Smith & Son	790	0	0
W. E. Blake, Ltd.	680	0	0
A. H. Inns	669	6	9
Triggs & Co., 92, The Chase, Clapham.*	632	0	0

[Architect's estimate, £755.]

LONDON.—For carrying out certain necess works of repair at the Cemetery, for the W minster City Council:—

Myring & Son	£49	0	0
E. H. Brooks	59	0	0
A. Jamieson, Hanwell‡	31	17	6

‡ Recommended for acceptance.

LONDON.—For the construction of new ga and the repair of the existing entrance gates the mortuary, Horseferry-road, for the Westmins City Council:—

F. Simons	£27	0
Burton Bros.	19	10
W. Wright & Son	19	10
J. R. Sims, Horseferry-rd, S.W.‡	17	18

‡ Recommended for acceptance.

LONDON.—Accepted for the carrying out various works for the London County Council:—

Clapham—Home for Little Boys. Emerge Staircase.

Triggs & Co.,	£52	0	0

Finsbury, Central—Winchester-street. Paintin

Allen, Fairhead, & Son	£241	10	0

Finsbury, Central—Winchester-street. Elect Lighting.

Napier Kimber, Ltd.	£109	11	0

Hammersmith — Ellerslie-road. Improvement Heating.

Palowkar & Sons	£96	0	0

Hammersmith—Thornfield-road. Electric Lighti

J. Whitaker & Sons	£420	11	0

WEYMOUTH.—For erection of boundary w between Sunnybank Estate and houses, Salisb and Granville-road, for the Corporation. K. S. S. Harris, Borough Engineer. Quantities Surveyor:—

Conway	£287	0	0
Pattinson	283	14	6
Parsons	275	0	0
A. E. Whettam, Weymouth*	265	0	0

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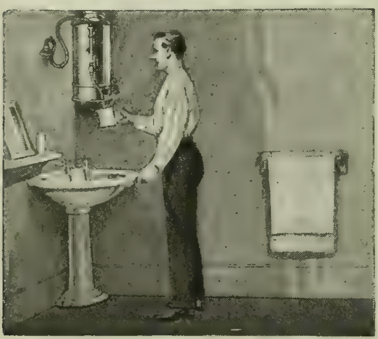

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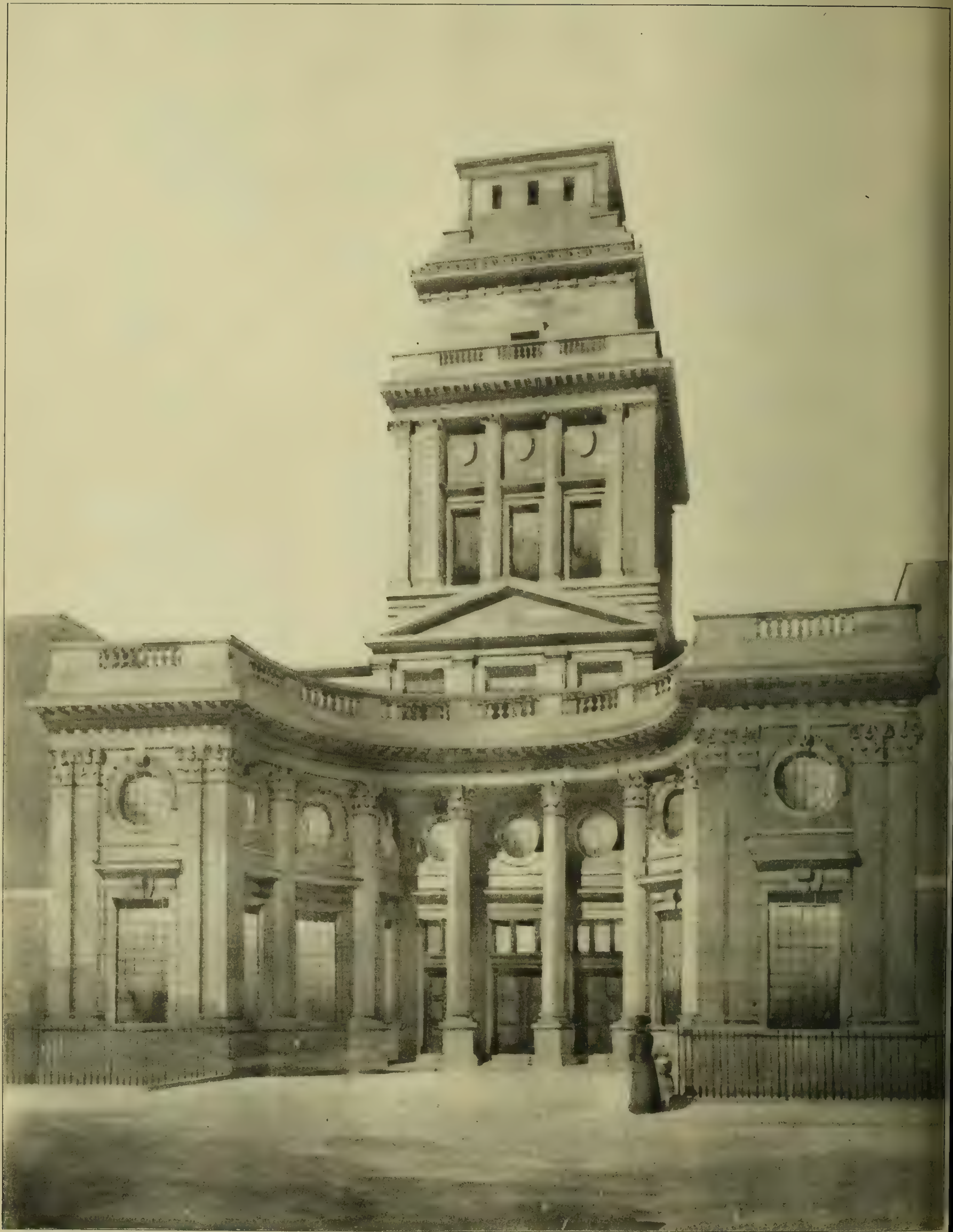

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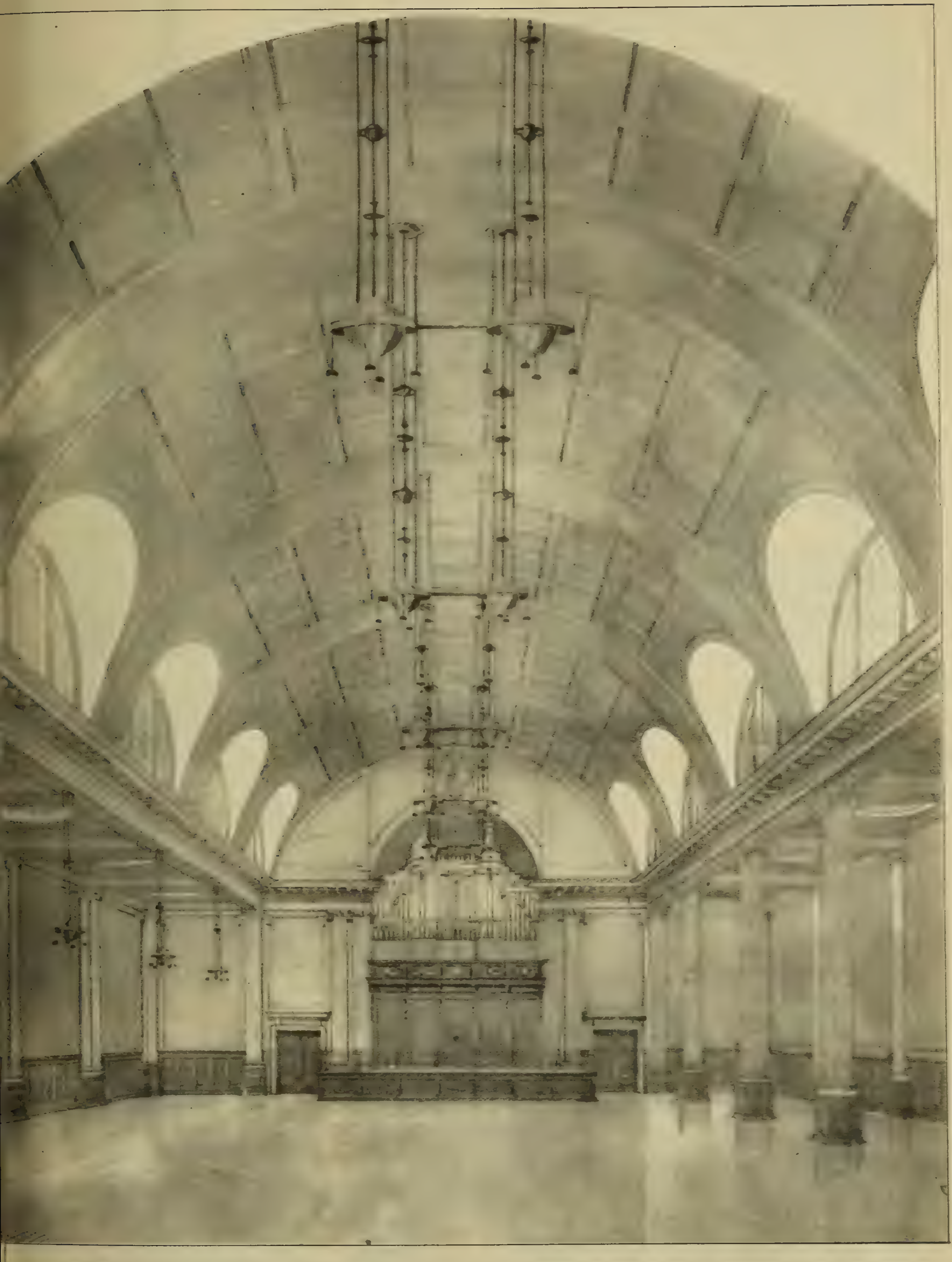
EXTERNAL VIEW.



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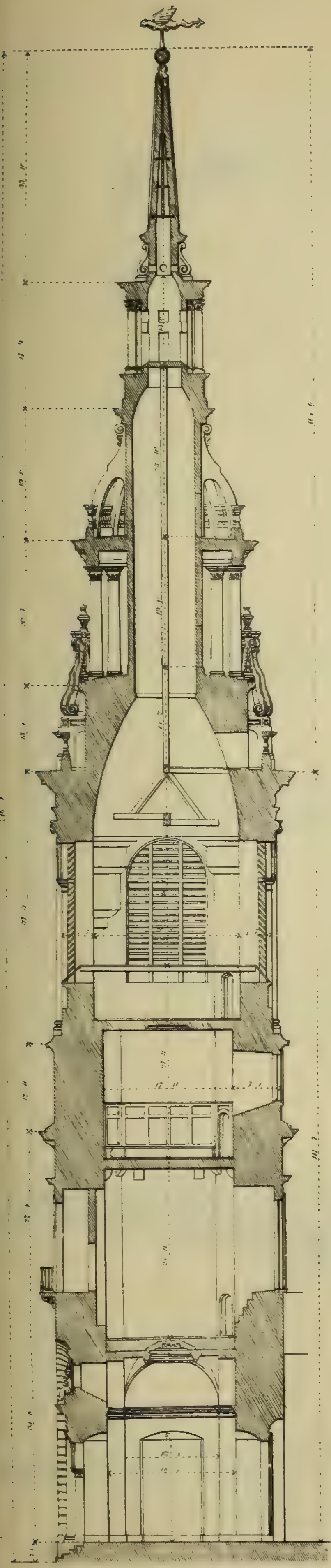
INTERIOR VIEW.

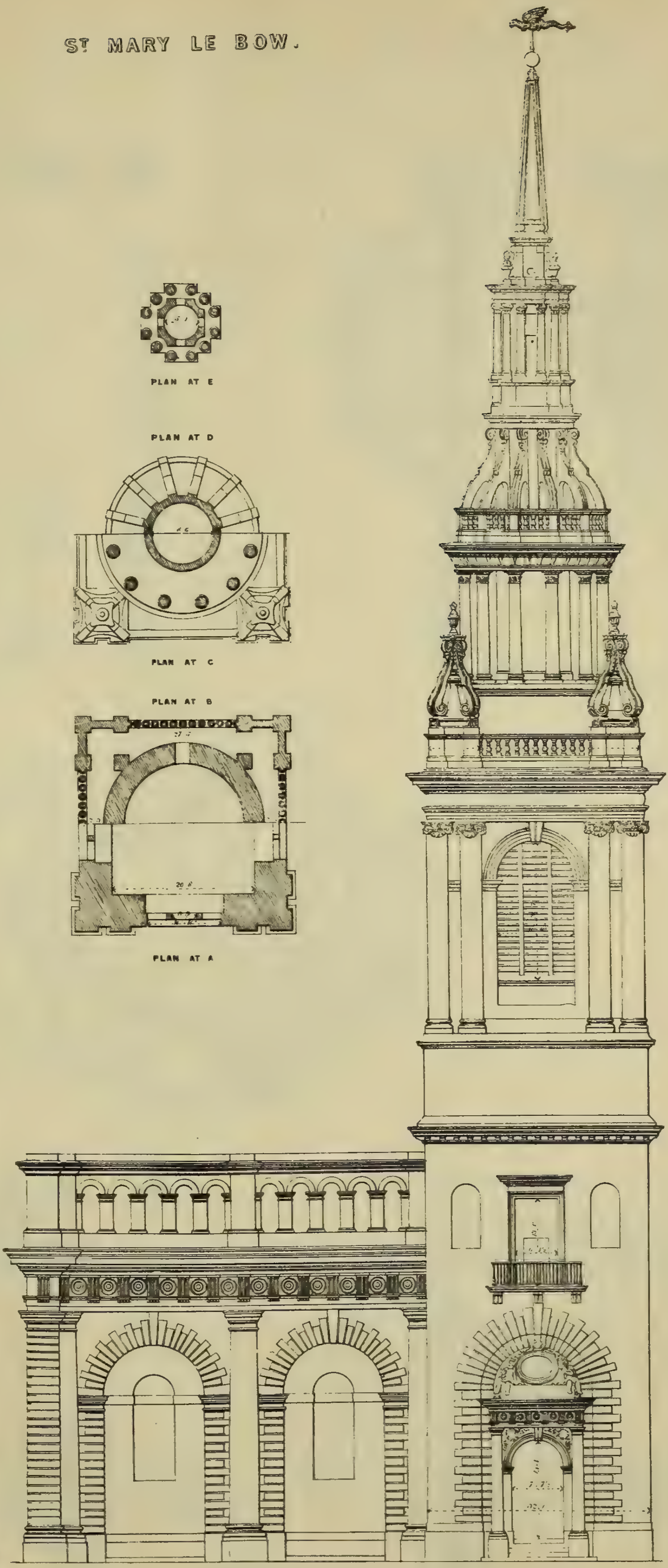
Sir C. Wren Churches

ST MARY LE BOW.



SECTION OF SPIRE

Measured & Drawn by J. Clayton



PLAN AT E

PLAN AT D

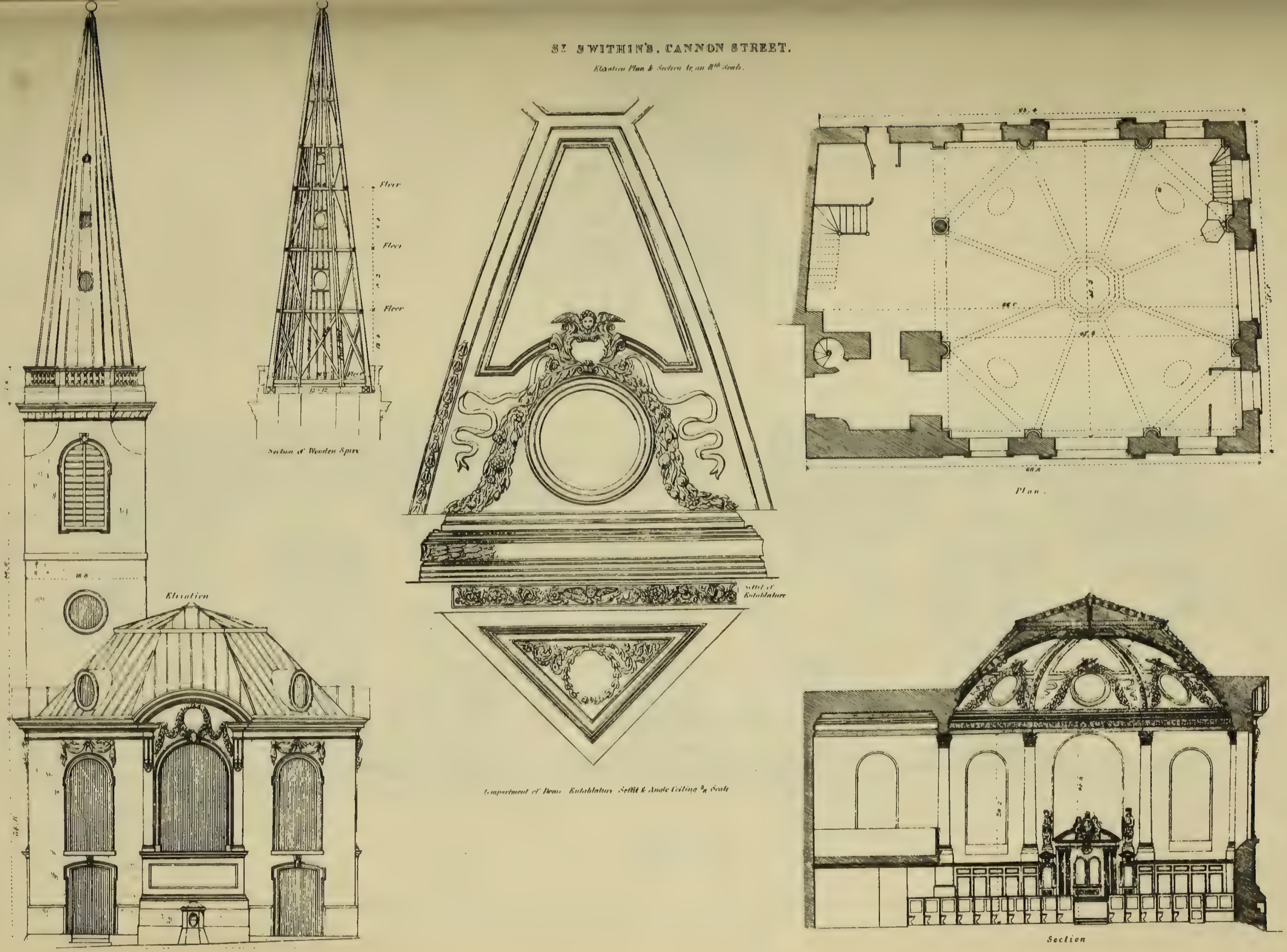
PLAN AT C

PLAN AT B

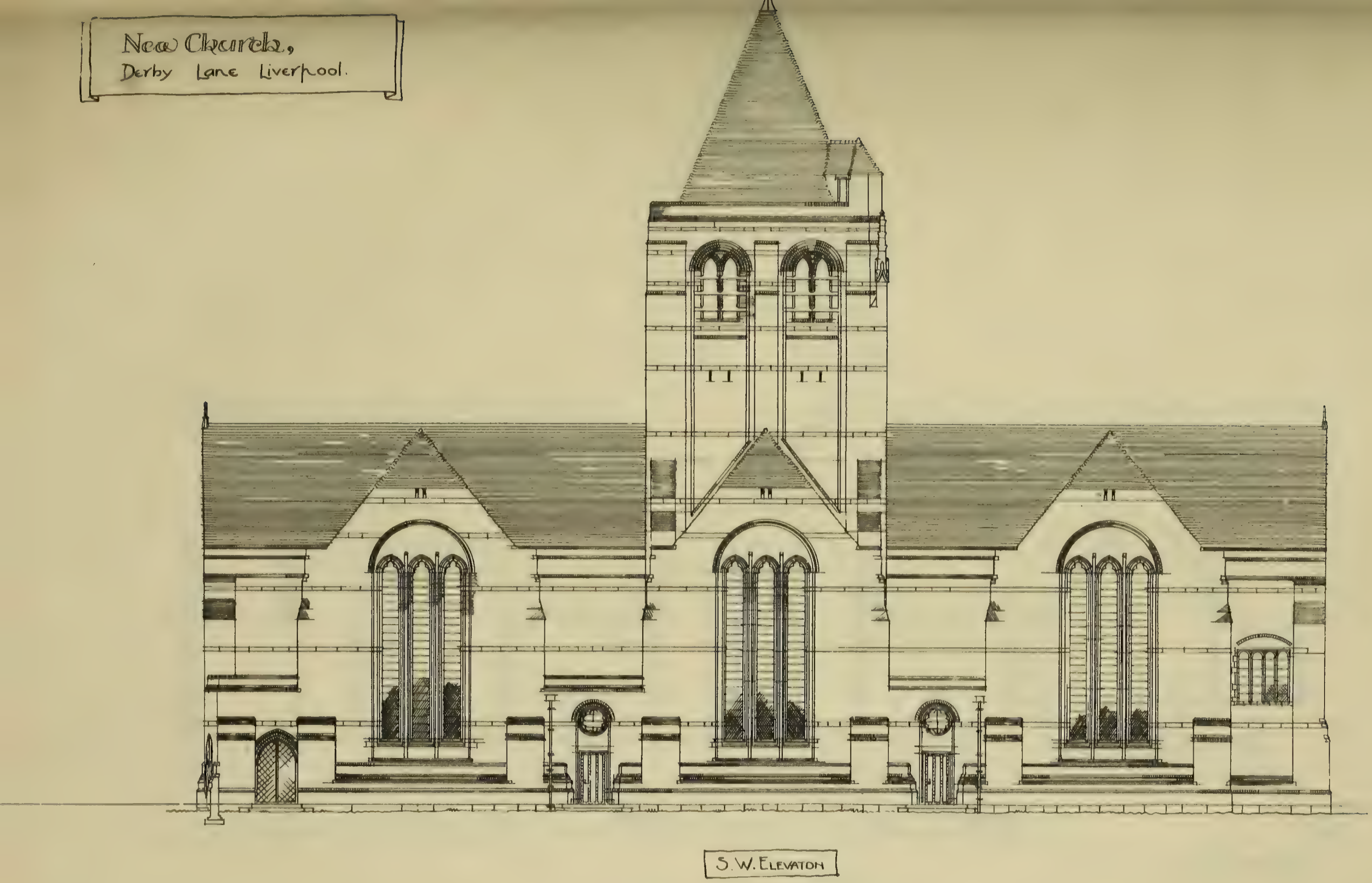
PLAN AT A

ELEVATION OF SPIRE *with the Arcade next Cheapside as originally intended by Sir C. Wren*

WREN'S CHURCHES: ST. MARY-LE-BOW.


St. SWITHIN'S, CANNON STREET.
Elevation Plan & Section to an 8th Scale.
Sir C Wren
Floor
Floor
Floor
Section of Wooden Spire
Elevation
Compartment of Dome Entablature Soffit & Angle Ceiling ¾ Scale
Soffit of Entablature
Plan.
Section

WREN'S CHURCHES: St. SWITHIN'S, CANNON STREET.



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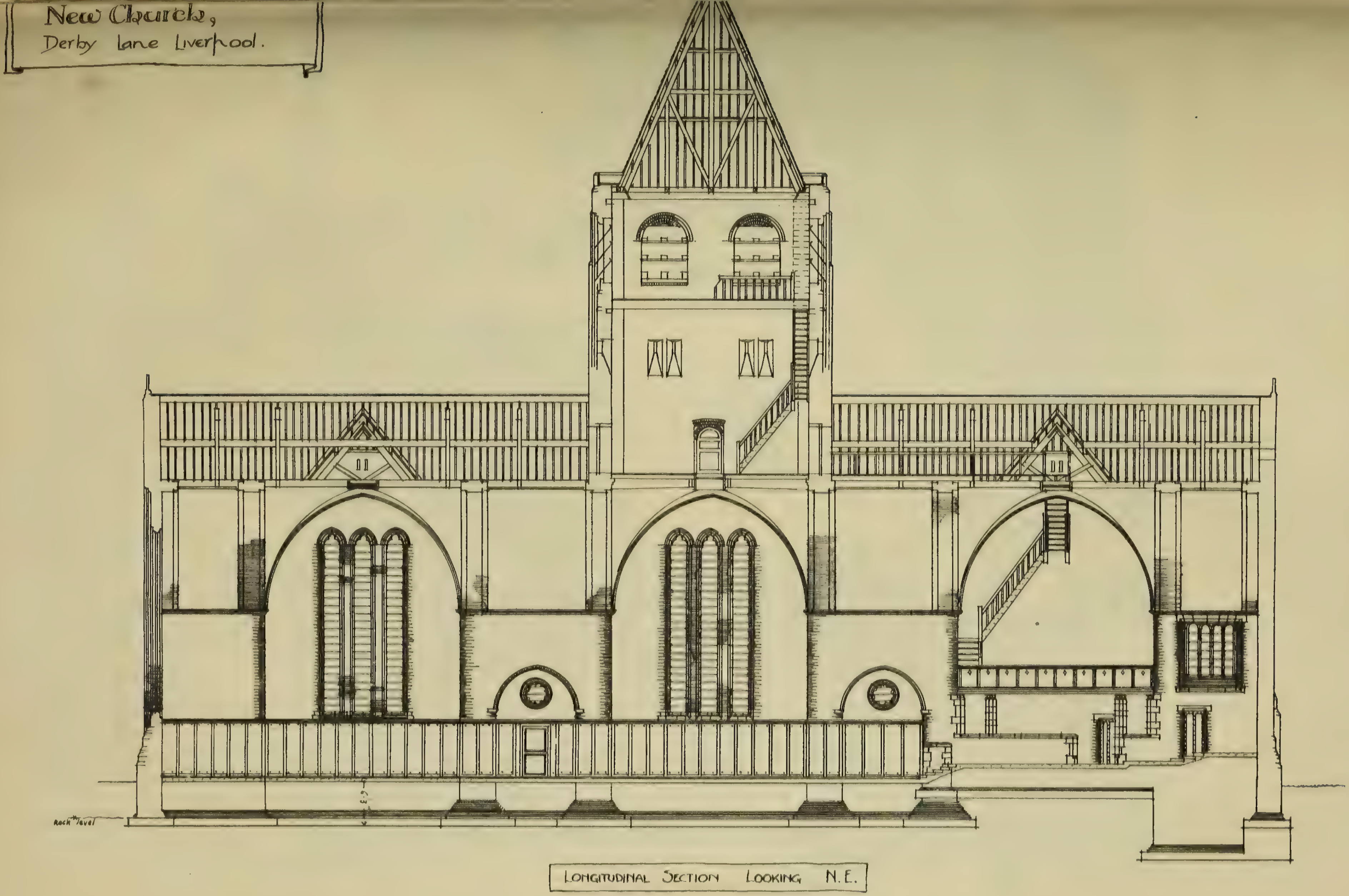

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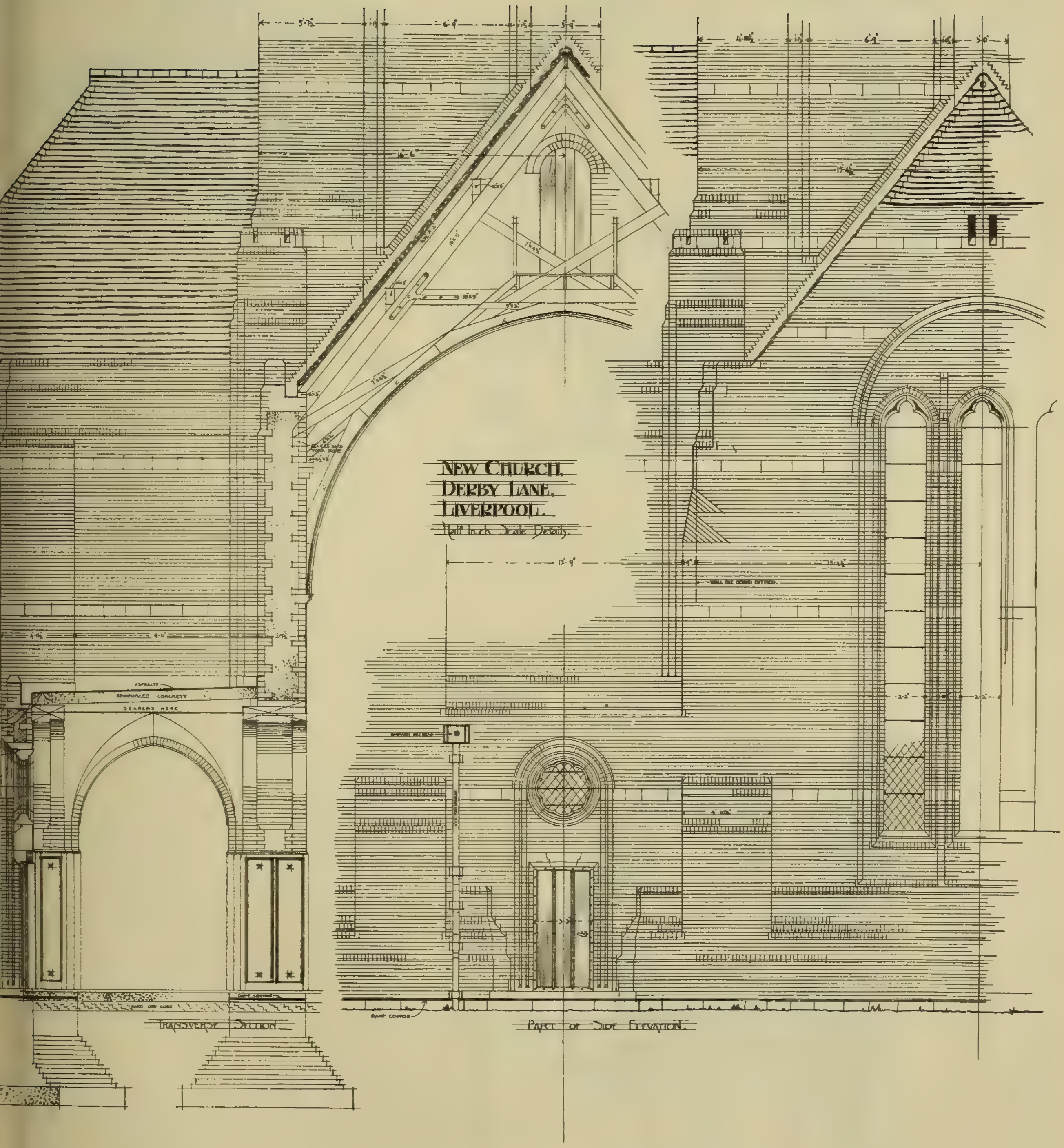
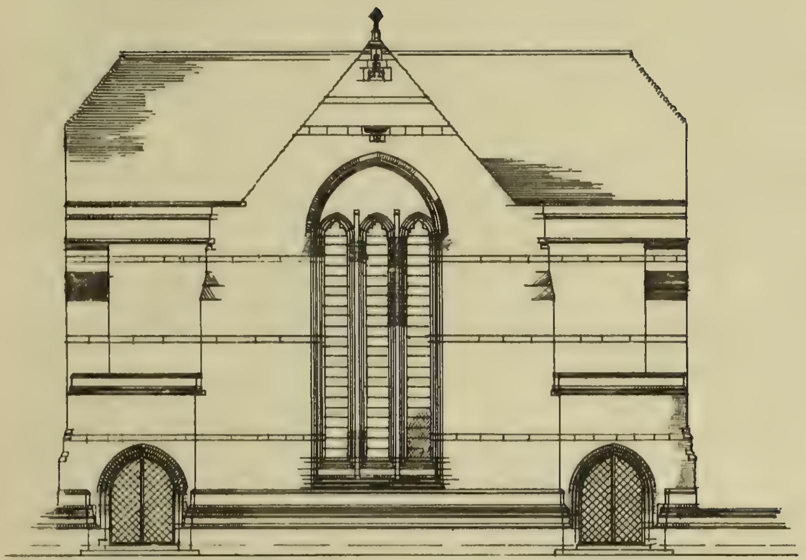
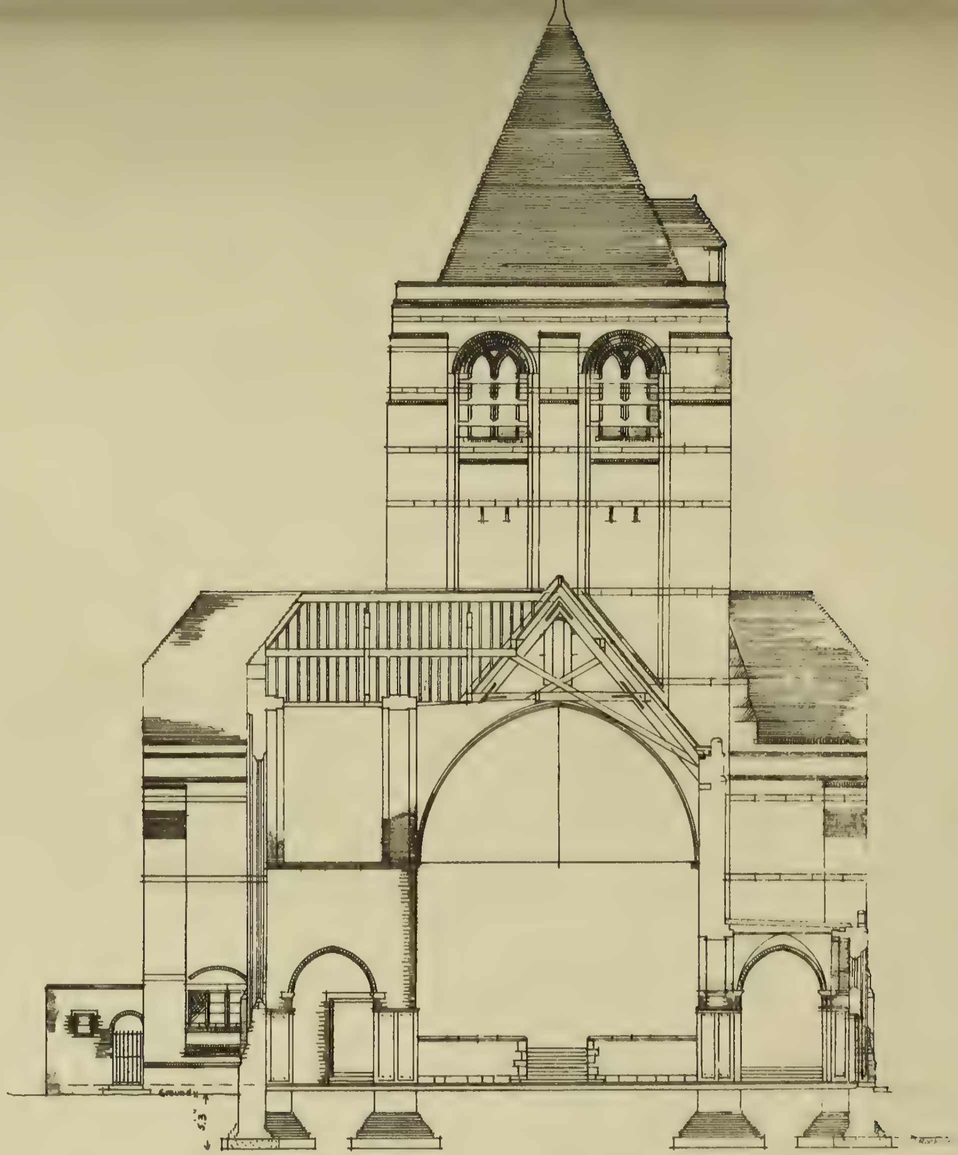


St. Paul's Church, Derby Lane, Liverpool.—Mr. G. Gilbert Scott, F.R.I.B.A., Architect.

New Church,
Derby Lane. Liverpool.



N.W. Elevation



Section A.B.

ST. PAUL'S CHURCH, DERBY LANE, LIVERPOOL.—MR. G. GILBERT SCOTT, F.R.I.B.A., ARCHITECT.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3809. FEBRUARY 4, 1916.

MONUMENTS AND REASON.

IT is natural that the subject of monuments should occupy the attention of architects and artists at the present time, for the cessation of many of the normal art activities of the community gives artists time to think out the probable effect of war on the arts and the nands which will be made on artists and architects when ice is re-established. At the same time it is wise to ognise that the practical demands on the nation's depleted ources will be so enormous that it is unlikely that any great r memorials will be carried out within a decade of the nination of the war. Small personal memorials will no ıbt be erected in numbers, and a discussion of the whole oject is useful and within the range of practical politics, en at a time when all our hopes and energies must be ıcentrated on the measures by which alone victory can be ained—the systematic and untiring prosecution of the war, ed by the collective organisation of the nation's resources.

The delivery of the first of Professor Adshead's lectures "War Memorials: Their Significance and Treatment," on dnesday, the 26th ult., was followed by a meeting held at the ildhall on Friday, the 28th, under the chairmanship of the rd Mayor, at which the Civic Arts Association was inaugurated er some admirable speeches by Lord Beauchamp, Professor wyn Image, Professor Lethaby, and others; while last dnesday Mr. Lawrence Weaver delivered a lecture at rpenters' Hall on the same subject, which he has also treated his recent book.

Monumental art has never been well understood or preciated in this country, and since the days in which the at living force of tradition died down our monuments ve too often suggested the unfortunate experiments of the o and the amateur, exciting a mild interest and often ridicule the minds of the public. The conservatism of the national racter, its inherent suspicion of the histrionic element in , and its individualistic traits have all been contributory ses to this neglect; a people whom the foreigner thinks of as ng cold and unemotional, because it is self-conscious, is likely to indulge like the Latin races in the expression of otion in terms of stone.

For this reason we doubt whether the colossal events now ing place, by which the destinies of nations and the future Europe may be permanently settled, will leave their mark on nation's art to the extent of that of other countries. The st moving and important episodes in the history of our race— signing of Magna Charta, the victories of Blenheim, afalgar, and Waterloo, the capture of Quebec, the Declaration American Independence, and, lastly, the magnificent rally the Dominions beyond the Seas to the aid of Britain—are accompanied with the dramatic incidents which would be oused in France, Italy, and we may add Germany. It will left to a future generation to realise to the full the mense significance of the events through which we are w passing and the personal attributes of the actors in the sent drama.

Though we may regret this for æsthetic reasons, we would have it otherwise, for, if the last century has seemed of crude and unlovely commercial development in which vn and country have been spoiled, it is precisely that velopment which has given this country the material power which the fortunes of the whole war may turn, and it is in same way the material and commercial developments ich will follow the present war which may at some future enable Greater Britain once more to secure the preponderance right.

Meanwhile we are entirely in sympathy with the endeavour to arouse public interest in the subject of memorials, though we believe those who wish to make progress possible should apply the precept *festina lente.* Nothing provokes reaction so quickly as injudicious enthusiasm; nothing is likely to meet with a more chilling response in this country than proposals which are open to the criticism of being over-impetuous. For better or worse as a nation we have no wish to "stagger humanity," and under no conceivable circumstances would the epoch of Louis-Quatorze have been possible in English history, nor with many times the resources of the Augustan Cæsars would the people ever be led to emulate the magnificence of Imperial Rome. We have in smaller memorials much to learn from the characteristic tablets and memorials in our old churches, to which good lettering, a sparing and characteristic use of ornament, and architectural form give point and distinction, and the admirable policy of the Civic Arts Association, whose aim is to encourage and utilise local talent, which is amply sufficient to fill these wants, is just what is required.

Professor Adshead stated in his lecture that monuments to commemorate the present war must be conceived on a gigantic scale, and he went on to sketch what this scale should be in the following passage:—

> But war memorials in a city cannot always be conceived on this gigantic scale, nor indeed always in this way. A classification of the more important of possible treatments from the point of view of their purpose and placing would give first consideration to the great shrines and Valhallas which stand in noble isolation on the summit of a mountain or the rising ground in the midst of a great plain. It might simulate a great shrine to be approached with awe and reverence. There might be a great glade, then a huge open space, flights of a thousand steps and terraces acres in extent. Its climax might be a great altar; the emblem of sacrifice a colossal figure of peace or the image of some great warrior of national significance. At the climax of such an approach might be a Valhalla, a temple set upon a rock. If of naval significance the finest of sites would probably be a small island in the sea or some commanding position on the mainland overlooking and approached from the sea.

Although we appreciate a very able exposition of the subject, we feel that such schemes are alien to the national character, and would in this country never be carried into execution. A Napoleon, even a Wilhelm II., or possibly the French, Italian, or American peoples might carry out monumental schemes on this scale, but here both temperament and history will operate against their possibility. A finely-conceived bridge over the Thames, a Memorial Chapel at Westminster, or the building of a southern embankment along the river are more likely to be the type of memorial schemes which will find support in this country when the time comes for the consideration of any permanent commemoration of the events of war.

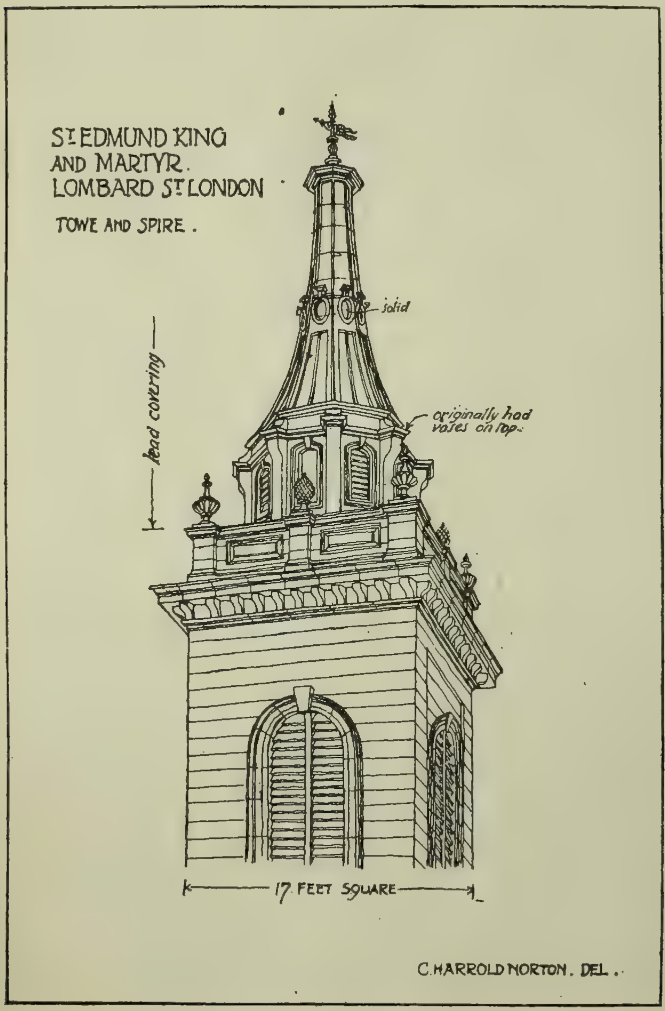
While we have the utmost sympathy and wish to see the cause of the architectural and sculptured arts furthered and advanced, and consider it a defect that so little attention is paid to these matters in our country, we feel that the process of education must be a very gradual one, and that national temperament sets limits to what is possible—limits that it is wisest for all to recognise, lest in proposing too much we lose the support which we might obtain—a support which is essential if national art is to be developed to its fullest extent. The Baroque spirit in Southern lands is often shown by the erection of magnificent gateways without apparent purpose; that spirit would make it possible to erect monuments in plains and desolate places; but here the *raison d'être* of a monument must be that it can be seen by many, and the size and scale of a monument will be largely determined by the position it occupies, not the event it commemorates—by reason rather than sentiment.

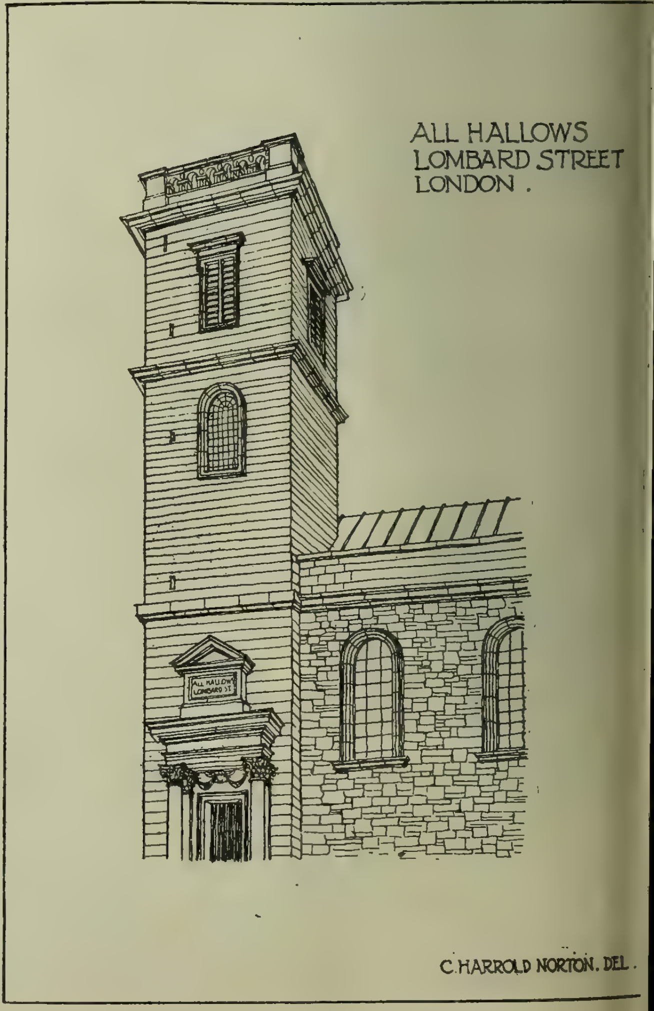
NOTES.

The Civic Arts Association. We consider the formation of a Civic Arts Association a happy augury that the people are waking up to the fact that most of the money that has in past years been spent in the erection of memorials has been money thrown away in bad and objectless art. The conviction expressed by Professor Selwyn Image and others who addressed the meeting held at the Mansion House last Friday, that most districts contain artists who, as in the past, are waiting to be entrusted with the design and fashioning of local memorials, is, we are sure, justified. And the Civic Arts Association will perform a much-needed task in acting as a local consultative committee with a view, not to directing those who erect memorials to come to London for designers, but of ensuring the recognition of local talent. It is the local flavour and character of Old English design which have made it such a treasure-house for students; it is the pride in what is best and most truly local out of which great national art in the past has sprung; and it is useless to write learned books on the beauty of past ages if we neglect the fountain-head out of which all has been derived—the pride and the glory of craftsmanship appreciated in the places where it has been born. We may have to wait years for the great monuments of the future, but those years will be full of promise if in the meantime we tend and encourage the rebirth of intelligent design in minor things in town and country alike. We wish the new Association, which, presided over by the Lord Mayor of London, counts many distinguished men among its ranks, a long and successful career, and trust that it may gather support and strength throughout the length and breadth of the land.

Professor Adshead's Lectures. We think the course of lectures which Professor Adshead is giving at University College every Wednesday at 5.30, in which he is dealing with war memorials in every aspect, is very opportune and useful to those interested in the arts. We believe it will be long before the psychological moment arrives when the erection of great war memorials will be on the *tapis*, but that is the more reason why we should make use of the interval to obtain education and form views as to the principles which should be followed in design, since we cannot claim to have the inborn and inherent taste in such matters which belongs to the Latin races. Compromise is inherent in our race, and the Englishman does not lose himself in abstractions or become an inspired enthusiast readily as the Spaniard and Italian did, and the Frenchma throughout his history did and does, and so it is probable that shall always seek some compromise between utility and beau instead of seeking beauty alone. The Victor Emmanuel monume at Rome would be impossible here, although England is a rich country than Italy; nor can we hope to emulate Paris in a certa note of magnificence and stateliness which distinguish its wide spac and vistas; but by accustoming ourselves to the contemplati and study of great schemes we may acquire a wider, freer outlo in matters of art which will in time bear fruit. But we belie the greatest monuments which will be erected here will be like to take the form of some necessary work more splendidly accomplish than usual—the building of monumental buildings rather th monuments themselves.

An Excellent Scheme. We hear that the authorities have in view remodelling of public-houses in the areas rou naval bases with a view to converting them in pleasant centres of hospitality and refreshme instead of leaving them mere "drinking shops," and the ideal aim at is to be the good-class inn of Nelson's day, with its comforta and pleasant rooms, picturesque bars, and fireplaces. In a wor they would adopt the ideals aimed at by Lord Grey's Trust, whi sells alcoholic drink but insists that good food and accommodati should at the same time be provided for the sojourner. We belie that the insistence on a good standard of comfort and accommodati and the obligation to supply meals at all reasonable hours in inns a hotels would do more to promote the cause of temperance than ma of the drastic measures which are supported by reformers. T record of "Prohibition" in America is not altogether an encouragi one, while, like other measures of compulsion, it carries with it t suggestion that the common sense and public spirit of co munities are at fault. We are not alluding here to military servi which, being a first necessity to the safety of the State, stands on different footing, but to measures which, however applied, constitu a criticism of the citizen's right to order his own private actio The proposal we have mentioned is fascinating from the arc tectural standpoints. The historic inns of England are an ass both to history and to art, and we should like to see an addition ma to their number, especially if the project were combined wi improvements from a social and human standpoint.





THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. VII.—St. Clement Danes.

The Church of St. Clement Danes is one of the largest and most interesting works of Wren, because, unlike almost all of his other work, it stands free in the middle of the Strand, surrounded by the remnant of what was originally a larger churchyard, but is now confined to an elliptical island site, the axis of which does not coincide with that of the church.

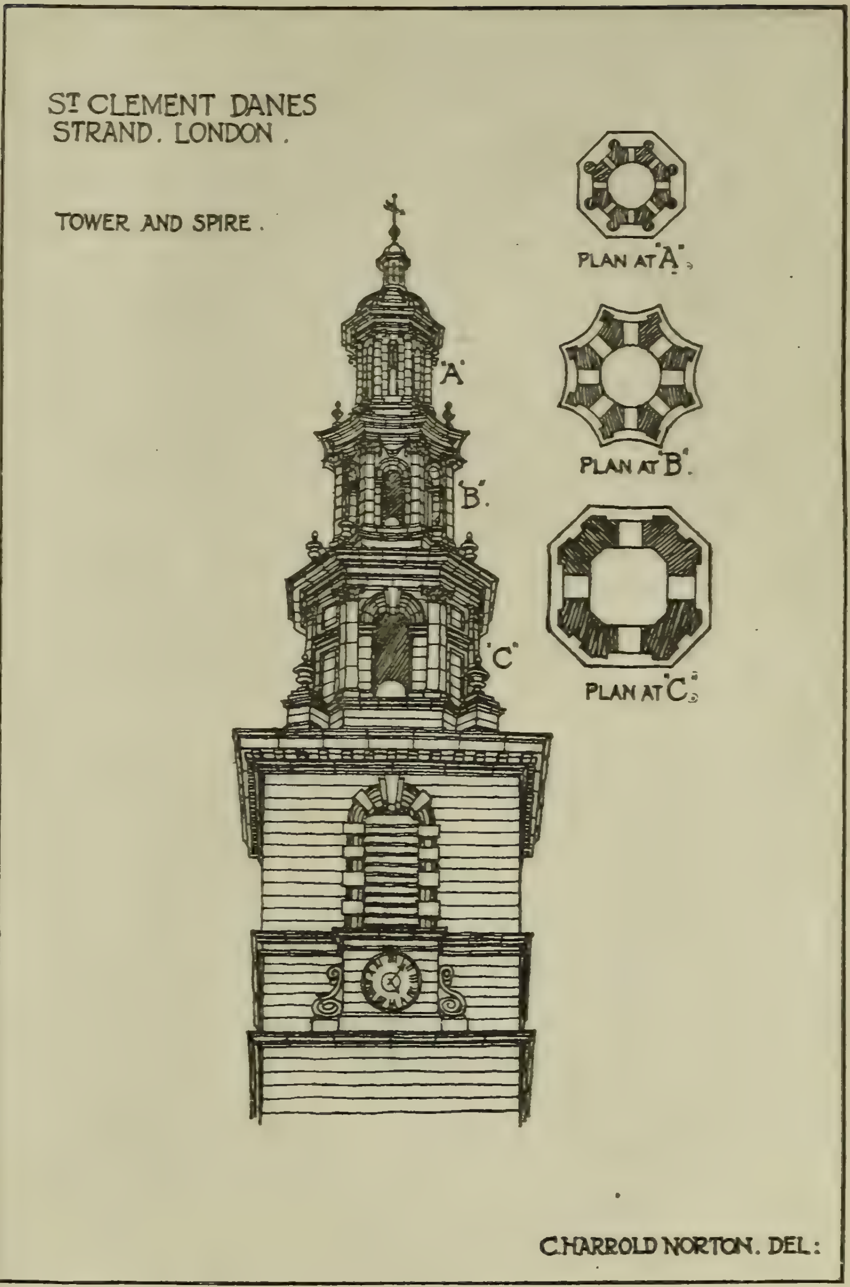
Several explanations of the term "Danes" have been suggested, the most picturesque of which is that when King Alfred had driven the Danes out of the City of London he was desirous that those Danes who had married English women should become Christians and settle westward, to promote which object the first church was built in the ninth century. St. Clement, according to tradition, was martyred by being fixed to an anchor and thrown into the sea by order of the Emperor Trajan, and the anchor which occurs in the decorations of the church and marks the boundaries of the parish is an emblem of the saint. The existing tower is reputed to contain in its mass the original tower, which was sometimes used as a beacon to guide the course of shipping on the Thames, and at others as a position where ordnance could be mounted to quell riots and disturbances.

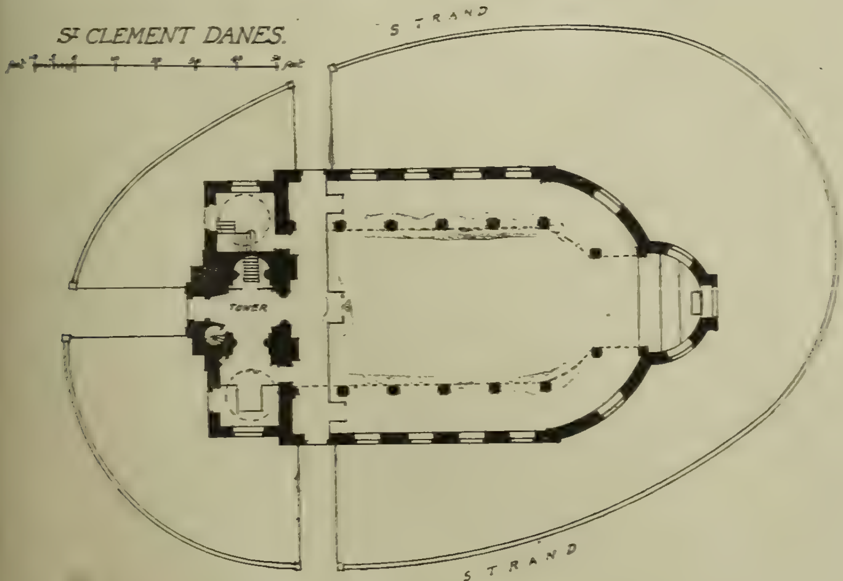
The bells of the church are referred to in the old couplet, "Oranges and lemons, The Bells of St. Clement's," which may owe its origin to an old custom in pursuance of which the servants who occupied Clement's Inn were in the habit of presenting oranges and lemons to the occupants of chambers in the Inn.

The old church, being greatly decayed, was taken down in the year 1680 and rebuilt two years later.

The church contains many memorial tablets and monuments. Among them are those to Sir Christopher Wren, George Haskard (the Rector of St. Clement's previous to the rebuilding of the church), and a memorial to the Twining family. The memory of Samuel Johnson, who was a constant attendant, is recalled by a brass plate affixed to the seat he occupied, a memorial window, and a statue in the eastern portion of the church enclosure.

The architectural interest of the church is concentrated externally in the curious treatment of the west front, especially in the lower stages of the tower, which is reminiscent of the freedom of earlier work. The two domed annexes flanking the tower on either side are pleasing in their proportion and outlines, and the sweep of the nave and apse is both good and simple.





St. Clement Danes, Strand.

(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

The design of the tower was evidently hampered by the necessity of retaining parts of the original structure; the steeple added by Gibb, though picturesque, is a poor piece of design, and the outline of its second story with the entablature arranged in concave sweeps is neither dignified nor happy. Internally the church is the most successful of all Wren's aisled designs, the concentration of interest towards the east end being especially happy in conception, and giving, what is so often lacking in Renaissance churches, a fitting emphasis to the chancel and altar. Though the decorative character in detail is secular, as in all work of the time, the dignity and harmony suitable to a church are fully preserved. The scheme of decoration needs, to give it full effect, more light and less colour, and would be greatly enhanced by the substitution of clear glass for stained glass windows, though they are more pleasing than most which have been inserted in other churches. The influence of the stresses in the roof trusses is seen in the columns which have been slightly thrust outwards; the bands round the oak columns are unfortunate, and might well be removed with advantage to the internal effect and dignity of the church.

St. Clement Danes, Strand, W.C.

No. VIII.—St. Edmund the King and Martyr.

The Church of St. Edmund the King and Martyr is situated on the north side of Lombard-street, opposite Clement's-lane. Edmund, the King of East Anglia, was taken prisoner by the Danes and shot to death by arrows, and the Abbey of Bury St. Edmunds was erected over his remains. After the Fire the Church of St. Nicholas Acons, which stood in Nicholas-lane, was not re-erected, its parish being united with that of St. Edmund the King and Martyr, the living of which is in the gift of the See of Canterbury.

The church stands north and south, the altar being placed in a recess in the north end.

Internally this is one of the darkest of Wren's churches, owing to the confined limits of the site and the height of adjoining buildings, and has been rendered darker still by the introduction of stained glass. The side and end windows do little under the circumstances to dispel the gloom of the interior, which may be said to be dependent on artificial light. A small skylight in the centre, now done away with, added to the insufficient light given by the windows, but at the same time detracted, as all flat ceiling lights inevitably do, from the effect of architectural form; because of the architectural axiom that the effective admission of light must be obtained by means of architectural features, not by the elimination of surfaces, a fact which explains the unsatisfactory appearance of a glass dome and the effectiveness of a range of windows round the base of a dome or lantern. There is some good woodwork in the church, though the high-backed pews, excepting the seats set apart for churchwardens near the south entrance, have been replaced by benches. The chief monument is one to Jeremiah Milles, Dean of Exeter, Rector of the united parishes, who died in 1784.

The exterior is among the most interesting of Wren's smaller churches, and with St. Nicholas Cole Abbey shows traces of Dutch influence in the unusual and quaint design of the leadwork of steeple. Many of the lead ornaments of the upper stages are now gone, but the succession of picturesque curves, broken by lunettes and ornaments, are very pleasing, while the stonework of the simple front is well balanced and full of character, and forms a much needed break in the monotony of a somewhat dreary succession of buildings devoted to commercial purposes. Though occupying an important frontage, the area occupied by the church is so small that its continued existence is probably better secured by circumstances than that of the large Church of All Hallows, Lombard-street, which, while set back from the adjoining streets, prevents the full utilisation of a most valuable and important angle site. The appointments to the living are made by the Crown and the See of Canterbury alternately, as the advowson of St. Nicholas Acons was vested in the Crown.

No. IX.—All Hallows, Lombard-Street.

All Hallows, Lombard-street, is one of the "concealed churches," being reached by a narrow passage from Lombard-street. The exterior has little beauty or architectural character; the interior, which is very dark, has a fine coved ceiling, the detail of which can be only seen by artificial light. A ceiling light was inserted in 1880. The woodwork is good, especially the altar-piece and pulpit. The coved ceiling is mitred back on each side of the heads of the windows, an arrangement characteristic of several of Wren's churches.

Like St. Edmund the King and Martyr the living is in the gift of the See of Canterbury, and with the parish of All Hallows have been united those of St. Benet, Gracechurch, pulled down in 1867, and St. Dionis Backchurch, which was pulled down in 1878, its ten bells being rehung in the tower of All Hallows. It is somewhat singular that All Hallows, which is one of the larger of the contemporary churches, has fewer claims to architectural distinction than many of the smaller works of Wren.

WAR MEMORIALS:

THEIR SIGNIFICANCE AND TREATMENT.

The first of a course of lectures on "War Memorials" was given at University College on Wednesday last week by Professor S. D. Adshead, M.A., and from it we take the following:—

"From the remotest ages it has ever been the custom of man to put on permanent record epoch-making events, and it would appear that up to quite modern times such records have always been of a strictly æsthetic and non-utilitarian kind. It is to the utilitarian patriots of last century that must be credited the discovery that such a memorial could take the form of a hospital or similar public institution. Only the other day I heard of a small urban council who, with an eye to thrift and economy, decided to commemorate the jubilee of Queen Victoria by the construction of a new public sewer. Needless to say it is not with such memorials that I am concerned.

It is generally assumed that the purpose of the war memorial is to celebrate victory, and, whilst this is so as regards most memorials that would come under this head, it must be remembered that there are some which it would be more correct to describe as monuments to peace. As to whether the patriotic spirit of a nation is extravagantly fostered by its indulgence in the erection of monuments commemorating victory, and as to whether excessive indulgence in this direction embitters rather than obliterates that feeling of wounded pride which must in some measure lurk in the heart of the vanquished, are questions which involve an inquiry, not only into the sentiment and purpose of the monument, but also into the ambitions, aspirations, and good taste of the nation that inspire its design.

War memorials have been erected with various ends in view, both for the purpose of inspiring noble action and also, it must regretfully be admitted, for inspiring demoniacal deeds. But the finest type of memorial is that which, whilst arousing the best sort of patriotism, at the same time holds no sting, innuendo, or cruel insinuation, either in the volubility of its sculpture or in its massive outline. How far from this ideal are those German monstrosities of post-Bismarckian days. They are the symbols of frightfulness, arrogance, and brutality, and a menace to the independence of man. They are a war cry rather than a message of peace and victory, and these Germans have learned it well. How different from the spirit of the typical French memorial, which simply presents the triumph of victory over death!

A war memorial designed with the noblest intentions should inspire hero worship and kindle in a nation the highest form of patriotism, that posterity may jealously guard a heritage dearly bought; and whilst all monuments designed to stimulate patriotism are not, strictly speaking, war memorials, at the same time it must be admitted that few great monuments have been erected that do not more or less directly relate to war.

Perhaps the finest idea is to erect something which, rather than eulogising war, commemorates peace. In its presentation it might be a sublime female figure symbolising humanity serenely gazing into the future and arising victorious above the blood-bespattered incidents of war. With such an interpretation the susceptibilities of even the most sensitive of vanquished nations would be honoured rather than provoked.

A war memorial may be prophetic and inspiring as well as retrospective; if it is both it will be sublime. But history shows us that this heralding of a future has not always meant the anticipation of eternal peace. Quite the reverse. The spirit of the later Germanic utterances in stone has undoubtedly been war, and still war, for by the sword shall Germany prosper. Fortunately, however, this has not been the sentiment of all war memorials. Perhaps no finer utterance can be discovered than that which is writ on the pedestal of a colossal figure of Christ, which, erected at the head of a mighty gorge and overshadowed by the loftiest peaks of the Andes, memorialises the celebration of peace between Argentina and Chili. The words are these: "Sooner shall these mountains crumble to dust than Argentines and Chilians break the peace which at the feet of Christ the Redeemer they have sworn to maintain." This is the pledge of two nations without a past, but who anticipate a great future.

Thus there is the war monument that is practically nothing more than an insult and a challenge—the monument of victory and the monument of peace. But there is another kind of war monument—"the monument of annihilation and disastrous defeat."

There is a sublime pathos in such a presentation, and we see something of it in most of the French monuments that have been erected since the war of 1870.

War memorials may commemorate victories achieved or disasters in which a nation has been engulfed, but they can also anticipate a peace that leaves no stain.

I am not here to plead the cause of peace, nor is it quite my *rôle* to discuss the ethics of war, but it is impossible to analyse the metaphysical aspect of the war memorial without being reminded of the enormous influence which it can be made to exert on posterity as a means of healing the wounded feelings of belligerents and leading them out of the paths of discord towards the glorious prospects of peace.

Let us, then, for a moment investigate this idea a little further and examine the spirit of the design in its relation to the national outlook. In the spirit of the design there is embodied a message, and it is this message which appeals to the patriotic instincts of a nation. To express it the designer of monuments must have a sensitive and sympathetic nature, and must understand and be deeply moved by the intellectual, historical, and political events which surround the occasion that has prompted his design. As an example, what in words is expressed in the spirit of the recently erected war monuments in Germany? Perhaps something of the sentiment they arouse is conveyed in the following lines:—

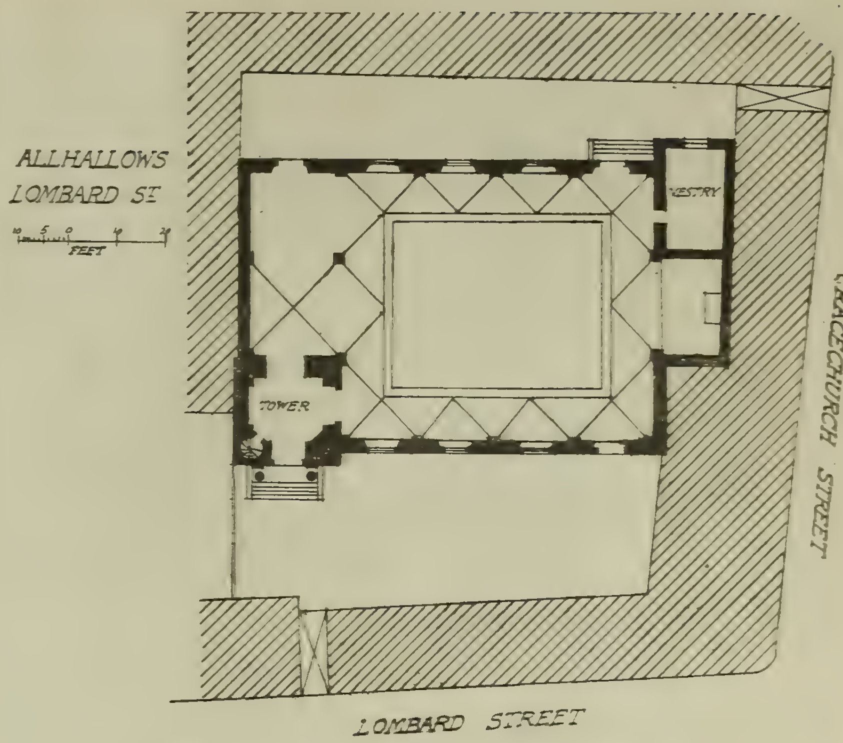
> From off the earth
> Flee justice, sentiment, and truth,
> Chivalry, gentility, and all the joys of youth.
> These Germany shall crush with brutal force,
> Through blood with iron she'll carve her vaunted course.

And, as a contrast, what is the spirit of the monuments erected to commemorate the wars of Napoleon? Perhaps, "The glory of France lies in her imperial dignity."

Quite different is the call of her later Republican memorials, which seem to proclaim: "Liberty, fraternity, and equality live eternally, the hope of France is in her posterity."

And what is the spirit of the monuments erected by the Italians to commemorate their fight for independence and unification, long striven after by Mazzini, Cavour, and Garibaldi between the forties and seventies of last century? Perhaps, "In the struggle of the masses of Italy was found independence and unity."

And what is the spirit of those monuments that have been erected in England to commemorate the South African War? It would be difficult to say. Perhaps the occasion of their erection is too near our time to venture an interpretation. Perhaps the circumstances of the war were such as could not arouse in this country the deepest national emotion. True, they depict the virtue of British pluck and endurance in the khaki-clad soldier, but great national ideals they certainly do not present.



Wren's Churches: All Hallows, Lombard-Street.

(Reproduced from the Ordnance Survey Map, with the sanction of the Controller of H.M. Stationery Office.) (*See page* 101.)

So it would seem that to have a great war memorial we must have a great cause, met by a great people inspired with the noblest ideals. How could the blood and iron policy of Germany proclaim its barbaric and brutal message other than by attempting to cloak itself in the spirit of the unsophisticated, the uncivilised, the archaic, and the savage? Only in such a guise could the military dominance of Germany be expressed in stone. And so Germany, to find inspiration for her post-Bismarckian monuments and to interpret the creed of her military party, has turned to Odin and Thor and the stone gods of their barbaric past for the personification of her great war god, Bismarck, the man of blood and iron.

Certain world-worn architectural forms have by repeated usage come to be recognised as the great symbols of war and victory. Amongst such may be mentioned in particular the arch and column; they evoke that subliminal sense of endurance, resistance, and permanence which an isolated piece of sculpture can never call forth. There is a royal grandeur and an imperial splendour about a great arch which nothing else can supply. A massive portal suggests the opening out of new worlds, it tabulates recollections of all great conquests.

Again, there is something heroic about a figure set upon a column; it suggests the triumph of an indomitable will. And if arches and columns suggested these things to the ancients, they suggest them with even greater force to us to-day. Continued use and resuscitation has woven around them a glory of tradition which time has enhanced and recognition petrified.

With the Greeks architecture was a priestess invoking the constant exercise of their imagination; but to the Roman, with his love of splendour and display, it assumed the semblance of an opulent queen. If her presence was necessary to the Greeks, to live under the shadow of her magnificence became an obsession with the Roman, who filled his imperial city with fifty triumphal arches and numerous lofty columns.

The mediævalist, essentially an individualist, was in the first place an adherent of the Church of Rome, and only in a secondary capacity a member of the State, and therefore with true religious zeal he memorialised his warriors and commemorated his victories in offerings to the Church. He built chapels and erected effigies, where the ancients and also the moderns in a more profane manner erected isolated statues and memorials tending to the deification of man.

It was not until the Renaissance that the great war memorials of the Romans were re-discovered and re-used. Indeed the use of the arch and column for such a purpose was not properly appreciated until the time of Napoleon, when Percier and Fontaine erected the arch of Carrousel in 1806 in front of the Louvre, a fit symbol of the imperial power of the First Consul, and a forerunner of the Arc-de-Triomphe erected later on.

The monument that is fundamentally an architectural composition can alone evoke the deepest sentiments of a great people. In the words of Symonds, "Architecture, more almost than any art, connects itself indissolubly with the life, the character, and the moral being of a nation and of an epoch."

But we have said, and it must still be asserted, that the most intimate and personal emotions can only be aroused by sculpture; the figure expresses in a more concrete way than architecture the whole gamut of the emotions, and thus we get the gods of peace and war.

To the adherent of the Church of Rome the symbolic representation of peace could only with true religious fervour be a figure of Christ. The profane presentation, on the other hand, is a female figure representing Humanity and holding in her hand the olive branch or the staff of Mercury."

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BOOKS RECEIVED.

Elements of Heat-Power Engineering. By C. F. Hirshfeld, M.M.E., and Wm. N. Barnard, M.E. (London: Chapman & Hall, Ltd. 21s. net; New York: Jno. Wiley & Sons.)

Text-Book of Geology. Part II.—Historical Geology. By Chas. Schuchert. (London: Chapman & Hall, Ltd. 12s. net; New York: Jno. Wiley & Sons.)

GENERAL NEWS.

Professional Announcement.

Mr. G. Herbert Bayley, civil engineer and surveyor, of 19, Cooper-street, Manchester, has been transferred by the Council to the class of full members of the Institution of Civil Engineers.

Housing Scheme, Coventry.

The contractors for 600 new houses at Stoke Heath, Coventry, have begun building operations. During the past three months the land acquired for the houses has been cleared of hedges, drains and gas mains have been put in, and the site has been almost encircled with railway metals. The houses will form fourteen streets, and each house will have a garden. A site for a permanent institute has been secured.

The Memorial to Florence Nightingale.

It is stated that the Queen has not yet fixed the date on which she will unveil a memorial tablet to Florence Nightingale in the crypt of St. Paul's Cathedral. It is anticipated that the ceremony will take place some time this month. The Committee which had in hand the erection of the statue in Waterloo-place had a small sum of money left over, and it was decided to utilise it in the form of a memorial in St. Paul's, to the erection of which the Cathedral authorities readily gave their consent.

Glasgow Building Trade.

The annual meeting of the Master Masons' and Brickbuilders' Association of Glasgow and neighbourhood was held recently in the Building Trades Exchange, Buchanan-street, Glasgow. Mr. John Train, President, was in the chair. The membership of the Association, it was stated, was ninety-eight, as compared with ninety-nine in the previous year. The financial statement showed a balance at credit of the Association of £245 as compared with £189 at the end of 1914.—Mr. John Train was re-elected President, Mr. J. Scott Inglis Vice-President, and Mr. William Muir Treasurer. The negotiations which had taken place during the year with a view to the adoption of a national mode of measurement were explained. A letter was submitted from Mr. A. K. Smith, one of the surveyors, who has been taking part in the negotiations, stating that some points about stone measurement had to receive final adjustment with quarry-masters, and that he trusted to be in a position to call a meeting of the sub-committee representing the trade at an early date. It is expected that the mode of measurement will be completed shortly.

The Surveyors' Institution.

The following have been successful in passing the Preliminary Examination, 1916:—

H. Anthony, Llanelly, S. Wales
F. H. Astill, Leicester
S. E. L. Bendall, Wells, Somerset
* G. A. Blanchard, East Croydon
H. F. Brewster, London
P. A. Cadman, Scarborough
J. K. Carless, Richmond, Surrey
H. A. Coningsby, London
A. G. Evans, Chepstow, Mon.
J. D. T. Eve, Bedford
E. J. Finzi, London
J. B. Florance, Olton, Warwickshire
L. T. Hinnell, Alderley Edge, Cheshire
N. C. Kemp, Kings Norton, Worcestershire
C. N. L. Lomax, Northwood, Winchester
G. E. Maynard, London
F. D. Metherell, London
R. H. Mumford, Forest Gate
J. T. Page, Ludlow
F. R. Ragg, Derby
A. B. Smith, Cheshunt
R. Sykes, Golcar, near Huddersfield
R. E. Tatham, Kirkby Lonsdale
P. H. Thomas, Carmarthen
J. R. Toovey, Watford
P. W. Turner, Mansfield, Notts.
E. A. Ward, Newton St. Cyres, Devon
J. W. Ward, Bere Alston, Devon
E. G. L. Williams, Didsbury, Manchester
J. C. Williamson, Oswestry.

Scottish Candidates.

J. S. W. Farrer, Annan
H. G. Kerr, Dalry, Ayrshire.

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* Head of list.

The Kaiser's Villa.

Telegraphing on the 27th ult. from Corfu, the *Petit Parisien* correspondent says:—"I visited yesterday Achilleion, the Kaiser's villa. It is needless to describe this work of art, or the bad taste shown in the Berlin handling of this Italian style residence, or the Imperial bath-room, where the statues are so arranged that they seem to be washing their feet in the water, or the colossal statue of Achilles, of a chocolate zinc colour, erected in the gardens with an inscription proclaiming William II. as the Emperor of the world."—Exchange.

Louis Raemaekers's Cartoons.

These cartoons left this country, we believe, on Tuesday, in order that they may be exhibited in Paris contemporaneously with the festivities arranged in the artist's honour in that city by the State, the City of Paris, and the artists. To meet this withdrawal and to avoid a break in the continuity of the exhibition at the Fine Art Society's Galleries, it has been arranged to exhibit a series of reproductions in colour facsimile of the cartoons which have the artist's imprimatur. One hundred of these facsimiles will be used for a volume entitled "A Neutral's Indictment," which the Society will shortly publish in a limited edition.

The Military Cross.

Temporary Second-Lieut. Arthur Michael Durrant, 8th Battalion, Loyal North Lancashire Regiment (attached 171st Tunnelling Company, Royal Engineers), has received the Military Cross for conspicuous gallantry and resource near Frelingheim on December 23, 1915. When a charge placed by our miners in the German gallery had only partially exploded and warned the enemy, Second-Lieut. Durrant, with two other officers, succeeded in placing and firing a second charge, which demolished the enemy's gallery. There was imminent danger throughout of the Germans exploding a mine. Lieut. Durrant is a member of the firm of Messrs. Moore-Smith & Durrant, of Union-court, Old Broad-street, E.C., and is an Associate member of the R.I.B.A.

A Plea for Museums.

At a general meeting of members of the Three Arts Club the following resolution was passed unanimously:—"That this meeting of members of the Three Arts Club, while recognising the need of economy in the national interest, regrets the decision to close picture-galleries and museums, being of opinion that in the present time of national stress it is undesirable to diminish opportunities for rational recreation, especially in view of the fact that so many of our Colonial fellow-subjects are now having their only opportunity of seeing some of our national treasures; and also because, in the case of the museums, the instruction there to be obtained is an invaluable national asset, worth more than the comparatively small monetary and other saving to be effected by closing the buildings to the public."

The New "Star and Garter."

The greater portion of the "Star and Garter" Hotel at Richmond has been pulled down, and in its place there will soon be erected a Home of Rest for Disabled Soldiers. The new building is designed by Mr. G. Gilbert Scott, F.R.I.B.A. The building will be a long, low structure, something in the style of an Italian palace. The bricks will be grey, and there will be an Italian roof. When the part which will be situated on the site of the demolished hotel is completed the annexe will be pulled down and the rest of the building erected on its site. The grounds will be made into Italian gardens; accommodation will be provided for 300 totally helpless men. Each man will occupy his own room, and there will be a central ward for those who need special attention. There will be a dining-room for such of the inmates as can use it, and suitable recreation and reading rooms. Access to the gardens and terrace and the extensive loggia will be made easy by lifts.

Captain Law.

We are informed that Second-Lieut. C. Orlando Law, Licentiate R.I.B.A., M.S.A., has recently been promoted to the rank of Captain, R.E.

Restoration of Ancient Building near Holyrood Palace.

At the Edinburgh Dean of Guild Court recently warrant was granted to Mr. George Dalziel to make alterations at 3–11, Abbey Strand, Holyrood. This is a building of some historical interest, and it is believed that the original part of the erection is some 250 years old. Many of its ancient features have been obliterated and spoiled, and the intention is to have it restored to its original condition externally. The work, which is to be carried out under the advice and supervision of Dr. Thomas Ross, architect, will consist of taking out the two top stories, thereby lowering the height of the building, and restoring a series of dormer or pedimental windows of masonry construction.

The "Empire Directory."

We have received the "Sanitary Record and Municipal Engineering Empire Directory and Year-Book" for 1916. The leading features of this year's edition, which is the thirty-fourth issue, include a list of new officials and municipal undertakings; a key for easy reference to every city and town in the United Kingdom; and the addition of various sections to the editorial portion, such as Municipalities and Motors, Engineering and Building Construction, Fire Prevention, Lighting, Heating, and Ventilation, and Sanitation. The section devoted to Road and Road-making, which has always been a distinctive feature of this publication, has been much amplified. The book is published at No. 8, Bream's-buildings, Chancery-lane, E.C.

Town Planning in Madras.

The following is the synopsis of the course of lectures delivered by Mr. H. V. Lanchester, Town-planning Adviser to the Madras Government, on Town Planning at the Madras Engineering College:—(1) "The Ethics of Town Planning," (2) "Civic Survey Methods," (3) "The Economics of the Civic Survey," (4) "Historical Study of Town Planning," (5) "Tradition and City Development," (6) "City Life and Housing," (7) "Commerce and Traffic," (8) "Contrasts—European and Indian Cities," (9) "Problems in India," (10) "The Uses of the Town-Planning Act," (11) "The Technique of City Improvement," (12) "Madras City." In this connection the Government of Madras issued an order in which municipal councils were requested to depute their engineers of different grades to attend the lectures, the order applying also to district boards. Special railway concessions were to be made in connection with those who attended the lectures from any distance.

London County and Westminster Bank, Ltd.

Mr. Walter Leaf, Deputy Chairman, presided at the annual ordinary general meeting of the London County and Westminster Bank, held on Thursday last week. He remarked that from the point of view of their deposits and their gross profits the year would appear to have been one of great prosperity. But they must not allow themselves to forget the underlying fact that this prosperity was really fictitious, being based on the using up of their savings in the past and that for every individual in the nation there was a paramount duty to save—to save to the uttermost in order to stop, and when the time came to replenish, the terrific drain upon our accumulated wealth which was implied in the unparalleled effort to which the nation had braced and was bracing itself. He went on to mention that no fewer than 1,000 of their staff had been released and were on active service, that 1,100 more had been attested, and many of them had already joined the colours. Practically the whole of the eligible staff had in one way or another offered itself. To their deep regret they had to record that they had lost thirty killed and eighty-two wounded.

HE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

THE EXAMINATIONS.

HE Preliminary Examination, qualifying for istration as Probationer R.I.B.A., was held London and Manchester on November 23 l 28. Of the thirty candidates admitted enteen were exempted from sitting, and the naining thirteen were examined, with the owing results :—

Centre.	Examined.	Passed.	Relegated.
London	8	6	2
Manchester	5	4	1
	13	10	3

he following passed and exempted candies—numbering altogether twenty-seven—e been registered as Probationers :—

R. Acton, Rainbow Hill, Worcestershire
H. Adams, London
M. Austin, London
E. Broad, Croydon
F. D. Calthorpe, tonehouse, Plymouth
Campbell, Blyth
C. Chandra, Bombay
E. Chicken, Belve- ere, Kent
S. Dixon, London
C. Fagg, London
C. Gibson, Swansea
C. Henriques, Lon- lon
De H. Hutton, Lon- lon
L. Jenkins, Bridg- nd, Glam.
J. S. Kwok, London
J. Mather, Harpurhey, Manchester
W. Park, Moseley, Birmingham
A. L. Priest, Adamsdown, Cardiff
R. V. Roberts, Derby
W. G. Seaton, Pontypridd
D. J. Simpson, Bristol
L. F. Smith, Derby
A. W. Stewardson, Carlisle
E. Sutcliffe, Todmorden, Yorks
N. B. Weekes, Liverpool
A. J. West, Blackburn
R. Whitworth, Reading

Intermediate.

he Intermediate Examination, qualifying registration as Student R.I.B.A., was held London and Manchester from November 19 November 26. Fourteen candidates were mined, with the following results :—

Centre.	Examined.	Passed.	Relegated.
London	9	4	5
Manchester	5	3	2
	14	7	7

he passed candidates who have been istered as Students are as follows, the names ng given in order of merit as placed by the aminers :—

O. H. Davies, Lon- lon
W. L. Roberts, Bredbury, near Stockport
W. H. Bowman, Pendleton, Manchester
G. W. H. George, Swindon
A. Gray, Hertford
O. A. Roff, Sheffield
J. T. Stone, London

Exemptions from the Intermediate.

The following Probationers, having produced satisfactory evidence of their training and qualifications, were exempted from sitting for the Intermediate Examination and have been registered as Students :—

E. C. Henriques, London.
L. De H. Hutton, London.

In accordance with the special concession granted by the Council to Probationers serving with the Forces who are eligible for the Intermediate Examination and whose Testimonies of Study have been approved, the following were also exempted :—

J. R. Ashworth, Accrington (Lieut. 5th Bn. East Lancs Regiment)
E. A. Bell, Leeds (Corporal, York Hussars)
H. W. Couchman, Tottenham (153rd Battery, Royal Garrison Artillery)
T. A. Dryden, Sketty, Glam. (University of London O.T.C.)
R. R. Gaskell, Hull (1/1 East Riding Field Company, Royal Engineers)
G. E. A. Greensill, Cannock, Staffs (Birmingham City Bn., Royal Warwick Regt.)
R. T. Grummant, London (Artists' Rifles)
A. O. Hector, Tilford, near Farnham (Corporal, Princess Patricia's Canadian Light Infantry)
H. Jones, Wingrave, near Aylesbury (19th Bn., Royal Fusiliers)
S. Lee, Newland, Hull (Royal Garrison Artillery)
J. H. Lumb, Heworth, York (1/6 2nd London, Royal Engineers)
T. M. Morgan, Aberdare (Inns of Court O.T.C.)
W. G. Norris, London (68th Coy., Army Ordnance Corps)
K. Palmer, Levenshulme, Manchester (Royal Army Medical Corps)
N. R. Paxton, Langside, Glasgow (Glasgow University O.T.C.)
D. S. Prosser, Llanishen, near Cardiff (Inns of Court O.T.C.)
A. I. Richards, London (Inns of Court O.T.C.)
C. D. St. Leger. Cosham, Hants (2nd Lieut., 13th Hampshire Regiment)
R. R. Shipley, Gateshead-on-Tyne (2nd Lieut., 63rd Northumbrian Division, Royal Engineers)
C. W. Smith, London (Artists' Rifles)
T. O. Thirtle, Harrow (Royal Army Medical Corps)
L. J. Williams, Penzance (2nd Lieut., 2/5 Bn. Duke of Cornwall's Light Infantry)

Final and Special.

The Final and Special Examinations, qualifying for candidature as Associate R.I.B.A., were held in London from December 2 to December 10 Of the twenty-nine candidates admitted to the Examination, ten passed, and the remaining nineteen relegated in various subjects. The successful candidates were as follows :—

C. C. Cheek, London
H. Colbeck, London
C. H. Gale [*Special*], Hillhead, Glasgow
A. B. Hamilton, London
C. E. Hill, Sheffield
J. V. Hull, Garstang, Lancs
C. S. Picton, London
H. P. Rainger [*Special*], Cheltenham
H. W. Rough [*Special*], London
G. Vinden, Reading

The number of failures in each subject of the Final Examination was as follows :—

A.	Design	8
B.	Construction—	
	(1) Foundations, Walls, Roofs, etc.	12
	(2) Iron and Steel	14
C.	Hygiene	11
D.	Properties and Uses of Building Materials	6
E.	The Ordinary Practice of Architecture	11
F.	The Thesis	2

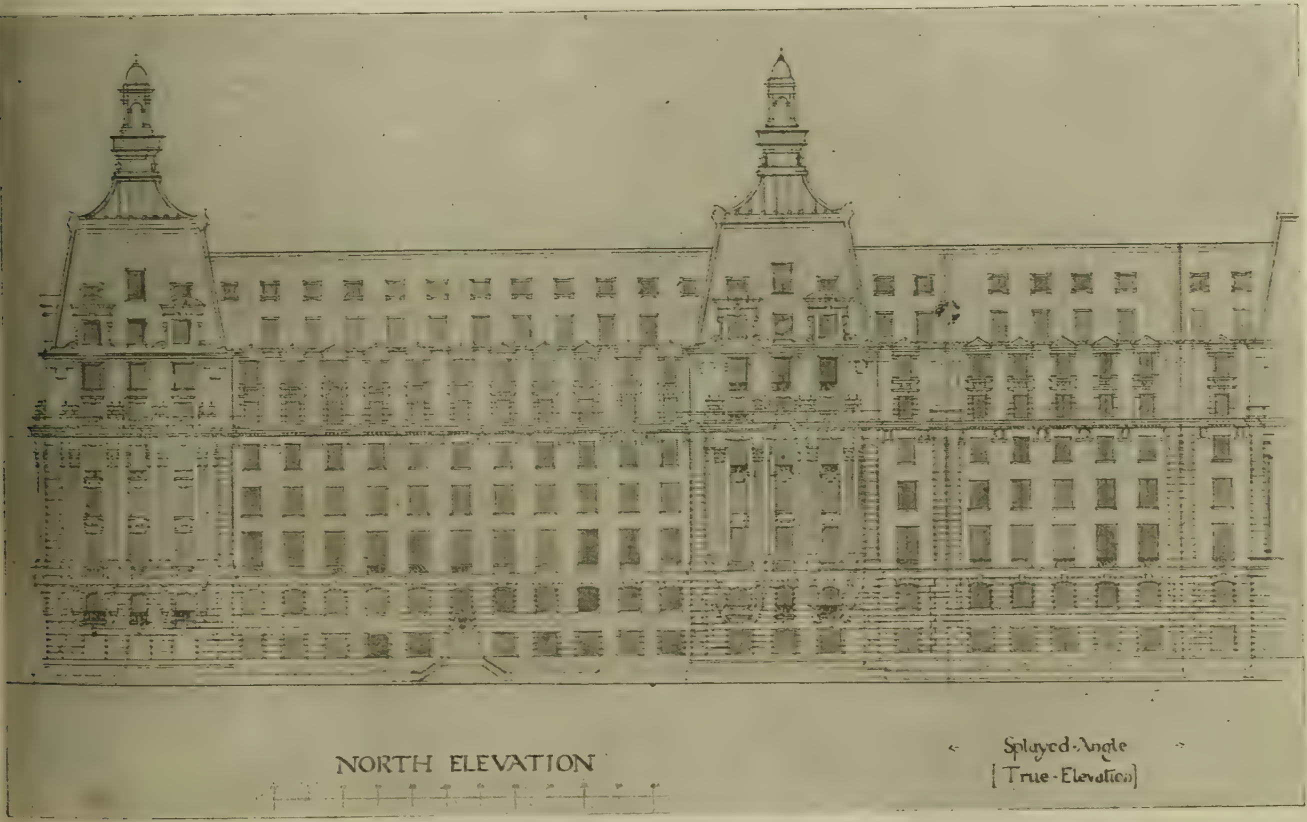
The Ashpitel Prize, 1915.

On the recommendation of the Board of Architectural Education, the Council have awarded the Ashpitel Prize for 1915 to Mr. Percy Joyce Adams, of "Fairmead," Woodside-road, Woodford, Essex (Probationer, 1906; Student, 1911; passed the Final Examination July, 1915), he being the candidate who has most highly distinguished himself in the Final Examinations held in 1915.

◆

ROMAN LONDON.

Mr. F. Lambert, M.A., of the Guildhall Museum, lectured before the Bishopsgate Ward Club recently on "Recent Roman Discoveries in London." Dealing first with the excavations made at Leadenhall Market in 1880–81, he showed drawings of the Roman remains then discovered, and said that a solid brick pier of Roman construction is still to be seen in the basement of a hosier's shop in Gracechurch-street. It is the more interesting as being probably the only piece of the solid brickwork of that era extant in this country. It measures 10 ft. by 6 ft., and is 3 ft. or 4 ft. high. Mr. Lambert touched briefly upon the recent discoveries under the crypt of St. Mary-le-Bow and below the cleared site in Finsbury-circus.



Board of Trade Offices: Competition Design.

By Mr. W. A. Pite, F.R.I.B.A. (*See page 106.*)

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ILLUSTRATIONS.

St. Clement Danes and St. Edmund King and Martyr.

WE reproduce these two plates from "The Churches of Sir Christopher Wren," by J. Clayton, which was published by Messrs. Longmans, Green, Brown, & Longmans in 1848, and which we give by the courtesy of Messrs. Longmans, Green, & Co. Further notes on these churches will be found on page 101.

Design for Board of Trade Offices.

WE reproduce the elevations of the design submitted for the new Offices of the Board of Trade by Mr. W. A. Pite, as we consider the type of design adopted to be both interesting and unusual in these days when architects are adhering more and more to academic classical renderings.

Aspley Heath Lodge.

WE illustrate a very pleasing example of Messrs. Adams & Holden's domestic work in the form of a lodge.

A Campo Santo on the Banks of the Marne.

THE illustration shown in this issue is a sketch design for a war memorial, in the form of a campo santo, to those of the British Army who fell in the historic Battle of the Marne, which threw back the Prussian advance on Paris in 1914. The French nation has already erected a fine obelisk on the site of the battlefield, and a scheme on the lines of Mr. Richardson's sketch, embodying an English cemetery, is well within the range of practical politics.

MEETINGS.

FRIDAY, FEBRUARY 4.

Town Planning Institute.—Mr. Seebohm Rowntree on "The Town Planning Proposals of the Urban Land Report." 8 p.m.

SATURDAY, FEBRUARY 5.

Provident Institution of Builders' Foremen and Clerks of Works.—Annual dinner (in the King's Hall, Holborn Restaurant). 5.30 for 6 p.m.

MONDAY, FEBRUARY 7.

Surveyors' Institution.—Mr. C. F. Slater (Fellow) on "Dilapidations—Some Notes and Suggestions." 5 p.m.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher on "English Renaissance and Modern Architecture." 4.30 p,m.

Royal Society of Arts.—Rev. Dr. Herbert West, D.D., A.R.I.B.A., on "Flemish Architecture." Lecture I.: "National and Historic Buildings in the War Zone." 4.30 p.m.

TUESDAY, FEBRUARY 8.

Institution of Civil Engineers.—Paper by Mr. Wm. Theodore Lucy, M.Inst.C.E., entitled "Notes on the Working of a Rack Railway," for discussion. 5.30 p.m.

WEDNESDAY, FEBRUARY 9.

Carpenters' Company.—Mr. Arthur Gardner on "Sculptures of Reims Cathedral." 7.45 p.m.

University of London, University College.—Professor Adshead on "The Sculptural Attributes of War Memorials." 5.30 p.m.

THURSDAY, FEBRUARY 10.

University Extension Lecture (at the British Museum).—Mr. Banister Fletcher on "The Colosseum, Rome." 4.30 p.m.

Institution of Electrical Engineers.—Mr. O. L. Record on "The Testing of Underground Cables with Continuous Current." 8 p.m.

CORRESPONDENCE.

Wren's Churches.

SIR,—The interesting and valuable drawings of two destroyed Wren churches published in your issue of the 14th ult., following directly upon the suggestion *re* the St. Paul's model on page 14 of your previous issue, have brought vividly into my mind a scheme which, if hardly practicable just at present, might be carefully considered in anticipation of a time when we may again bend our energies to the things of peace.

It is this: that either as an adjunct to the Victoria and Albert Museum, or as an independent institution, a stately room should be dedicated to the perpetuation and display of those designs of Wren which cannot be studied as actual buildings. In the centre of the room would stand the restored model of the First Design for St. Paul's, and round it would gradually grow up a collection of large-scale models of those destroyed Wren churches of which complete drawings are extant. On the walls would hang all the best drawings and prints of these churches that could be obtained. The models would be made as realistic as possible so as to appeal to the half-trained eye, and the drawings would include new perspectives of all those buildings not represented in the solid. If only a gradual introduction of exhibits was attempted, and a suitable home for them could be found in an existing building, no heavy expense would be involved, and doubtless some drawings and even models would be given as free-will offerings.

To those who have diligently explored the wide field of Wren's genius, the desirability of such a collection, worthily housed, needs no emphasising; but it is well that the arguments in favour of it should be distinctly set forth. They may, I think, be enumerated as follows:—

1. It is due from us as an act of penitence and slight reparation for our national sins against the beauty of London.

2. It is due also as a completion of the monument to Wren for which we can "look around" in St. Paul's and his other extant works; and surely a complete monument is needed to one who combined sound practical building with mathematical science and a keen sense of beauty.

3. It would (especially if attached to a well-known museum) reveal to a large section of the public the character of our loss from the destruction of eighteen Wren churches, and thus help to safeguard those which remain.

4. It would be of great interest and value to architectural students and architects generally.

5. It would strengthen the historical records of bygone London, and—if I may indulge in prophetic dreams—make easier, in an age when art shall have come to its own, the reconstruction on their original sites, or even on new ones, of some of those unique conceptions which a grosser age has laid low.

Croydon. LINDLEY LATHAM.

Liverpool Monuments.

SIR,—Referring to your interesting article on "Liverpool Monuments," a sentence on page 62 of January 21—"the familiar green-stained white of the Portland pedestal under a bronze figure"—made me think of "Clive," in Whitehall, and other examples. I write to ask would it not be possible for the sculptor or his architect to arrange a drain round the top of the pedestal with a down pipe drilled through the heart of the Portland stone block to prevent this? G. DAVIDSON (Major, R.E.).

Re Painters' Rates of Wages.

SIR,—I shall esteem it a favour if you w kindly give the following statement a space the columns of your journal.

On August 23, 1913, the House Painters a Decorators of London came out on strike f the purpose of securing an advance of wag amounting to 1½d. per hour, together with code of working rules. The total number men leaving work was roughly between 18,0 and 20,000.

After a period of four weeks, during whi time they were in negotiation with th employers, they accepted an advance of wag amounting to 1d. per hour on the rates th existing of 8½d. and 9d., making the new rat 9½d. and 10d. per hour. Some questions we submitted to the Board of Trade on poin of working rules, and on October 2, 191 Mr. Benjamin Francis Williams, K.C., gave a award in which the 1d. per hour increase w embraced.

Owing to the hostile attitude of the Lond Master Builders' Association, the followin important spending authorities have agre to stipulate in their contracts with build and other employers of labour that painte minimum rate of 9½d. per hour must be paid :-

Government work—all departments.
The London County Council.
The Metropolitan Asylums Board.
Metropolitan Borough Councils numberin eighteen.
Urban and District Councils within t twelve-mile radius, five.
Boards of Guardians numbering twelve.

In addition a large number of busine houses have taken similar steps to prote the workmen, and our revised Fair Firm list at present contains the names of ov 500 competing firms in the painting, decoratin and building trade.

The refusal of the L.M.B.A., whilst offici is not general, seeing that a considerable numb do pay 9½d. whilst others pay 10d.

I therefore submit, sir, that the quotati of 9d. as tabulated in the *Builder* is incorre and trust that you will make such alteration will meet the case for the workmen concerne

JOHN BANCROFT,
London Organiser,
National Amalgamated Society of Operati
House and Ship Painters and Decorators.

FIFTY YEARS AGO.

Permanent Sun-Printing in Oil Colours and Printer's Ink.

THE ingenious process of Mr. John Pounc of Dorchester, whereby the sun is made print photographs from ordinary negative upon paper prepared with sensitised printe ink, has already been more than once favou ably noticed in the *Builder*. Mr. Pounc is still making advances on his original id of the carbon process for the attainment the great desideratum of truly permane photographs. He now prints, by his printe ink and oil colour processes, on ceramic war the photographs being thus burnt in up the ware; and is also experimenting wood for decorative panels, as well as f engraving blocks. The pictures are tran ferred either to wood for panels, etc., or lithographic stone for ordinary lithograph printing, by simple means; and really t effects, especially in the form of lithograph are excellent, though not so fine, of cours as his photographs themselves, which w admit of even microscopic examinatio The transfers to wood may be said to still in an immatured state; but they promi well, whether for decorative panels or f the engraver. For panels (as for ceram ware also, we presume) the photograp may be taken in his sensitised oil colou (green, blue, red, etc.) as well as in ordina printer's ink sensitised. A specimen of M Pouncy's sun-printing in printer's ink ma be seen at the *Builder* office.

[*** We give the above extract from t *Builder* of February 3, 1866.—ED.]

LEGAL SECTION.

IOTES ON CURRENT CASES.

Hart *v.* Rogers :
Liability of Owners of Flats for Repairs.

IN the case of Hart *v.* Rogers, which was tried by Mr. Justice Scrutton on December 3, 1915, the plaintiff claimed £115 9s. 6d., vo quarters' rent of a suite of furnished rooms Moscow Mansions, Cromwell-road. A term the tenancy agreement was that £20 was to paid for dilapidations at the end of the nancy. The defendant (the tenant) alleged at the plaintiff (the owner) retained control the roof of the premises, and that, owing to s neglect to repair it, water came through to the flat and rendered it unfit for human abitation, and that, as a consequence, his ife became ill, and he had to find another ouse during the period claimed for. He also ounterclaimed for damages in respect of s wife's illness.

Mr. Justice Scrutton held that the roof was nder the control of the landlord, and it was ot included in the letting to the tenant, and at the defect which caused the damage was ot in a part of the roof included in the demise. being clear that ordinarily the lessor of an nfurnished house does not impliedly warrant at it is fit for occupation, but that the lessor a furnished house or apartments does npliedly warrant that it is fit for human cupation at the beginning of the tenancy, e question arises—What is the legal position cases where the landlord retains in his own ossession and control something essential the enjoyment of the premises demised, such a staircase or a roof ?

In Carstairs *v.* Taylor ([1871] L. R. 6 Ex. 217), hich is still the leading case on such questions, e plaintiff hired of the defendant the ground oor of a warehouse, the upper part of which as occupied by the defendant himself. The ater from the roof was collected by gutters to a box, from which it was discharged by a pe into the drains. A hole was made in the ox by a rat, through which the water entered e warehouse and damaged the plaintiff's oods. The defendant had used reasonable re in examining and seeing to the security the gutters and the box. In an action by e plaintiff against the defendant for the mage so caused it was held that the defendant as not liable, either on the ground of an implied ntract or on the ground that he had brought e water to the place from which it entered the rehouse.

Chief Baron Kelly said it had been argued at the defendant was liable on the ground her of contract or of a duty imposed by law. is unnecessary to consider whether, as tween landlord and tenant, where the ndlord is in possession of the upper floor d the tenant of the lower, there is an implied ntract by the landlord so to maintain the rt of the premises in his possession as not permit damage to happen to the tenant rough any ordinary causes. Assuming that ere is such an implied contract, or assuming at, independently of the relation of landlord d tenant, there is a duty on the owner d occupier of the upper part of a house so manage and keep it as to prevent the ppening to the occupier of the lower floor accidents through ordinary causes the intiffs would not be entitled to recover, since complete performance of any such contract duty would not have guarded against the schief in question. It was not that the fendant left the roof out of repair, or did act directly occasioning the passage of the ter, but the cause of the mischief was that rat had shortly before the accident eaten way through the box into which the gutters charged themselves, and made a hole through ich the water poured into the warehouse. arly, there was no duty on the occupier ove, whether he be landlord or only occupier, guard against an accident of this nature. It absurd to suppose a duty on him to exclude the possibility of the entrance of rats from without.

Baron Bramwell said the defendant made a gutter of such a shape, character, and direction that when the hole in question had been made the water poured into the plaintiff's premises. The defendant conducted the water to the place whence it escaped, and he may therefore be said, in a sense, to have poured the water on to the plaintiff's premises, which is more accurate than to say that the water escaped, or to use any other expression which speaks of the water as though it were an active agent. Suppose, he said, that an ordinary cistern were pierced by a stranger, and the water in consequence escaped, the proximate cause of the accident would be the act of the person who pierced the cistern ; the owner of the cistern could not be said to have poured the water upon his neighbour's premises unless he afterwards filled the cistern. But the defendant here has conducted the water to the place from which it poured on to the plaintiff's premises, and he may therefore be said to have poured it on to them. So far, the case resembles Rylands *v.* Fletcher, but there is a material difference between the cases. In Rylands *v.* Fletcher the defendant, for his own purposes, conducted the water to the place from which it got into the plaintiff's premises. Here the conducting of the water was no more for the benefit of the defendant than of the plaintiff. If they had been adjacent owners it would have been for the benefit of the adjacent owner that the water from his roof was collected, and the case would have been within the decision in Rylands *v.* Fletcher ; but here the roof was the common protection of both, and the collection of the water running from it was also for their joint benefit, and the plaintiff must be taken to have consented to the collection of the water which was for their own benefit, and the defendant can only be liable if he was guilty of negligence. Is there, then, any evidence of negligence ? It is said there was negligence in so constructing the box that if a hole were made in this place the water would enter the warehouse. But how can it be said that there was negligence when it was constructed in the way in which such things are ordinarily constructed ? When it is repaired it will probably be repaired in such a way that the accident cannot occur again ; but to treat this as evidence of negligence is to say that whenever the world grows wiser it convicts those that went before of negligence. It is said that rats can be easily got rid of out of a warehouse ; but, assuming it to be so, it is no negligence not to take means to get rid of them till there is reason to suppose they are there, and it cannot be said that persons ought to anticipate that rats will enter through the roof by gnawing holes in the gutters.

Baron Martin delivered a similar judgment, and said that a person who takes a floor in a house must be held to take the premises as they are, and cannot complain that the house was not constructed differently. Probably the defendant was under a liability to use reasonable care in keeping the roof secure, but he cannot be held responsible for what no reasonable care and vigilance would have provided against. He cannot, certainly, be considered guilty of negligence, for he caused the roof to be examined periodically, and it was, in fact, examined and found secure only four days before the occurrence complained of. He had acted with care, and performed the whole of the duty that was cast upon him. As to the duties implied by law, the true rule was laid down in the year 1681 in Paradine *v.* Jane : "Where the law creates a duty or charge, and the party is disabled to perform it without any default in him, and hath no remedy over, there the law will excuse him ; as in the case of waste, if a house be destroyed by tempest, or by enemies, the lessee is excused, but when the party, by his own contract, creates a duty or charge upon himself he is bound to make it good, if he may, notwithstanding any accident by inevitable necessity, because he might have provided against it by his contract." That rule, in his opinion, was an answer to the plaintiff's claim.

The case of Hargroves *v.* Hartopp ([1905] 1 K. B. 472) also deals with the liability of the landlord for damages caused by disrepair of a roof. The plaintiffs were tenants of a third floor in a building which, in this part of the premises, was the highest floor. A rain-water gutter in the roof, the possession and control of which was retained by the landlord, the defendant, became stopped up by an accumulation of rubbish, the greater part of which had been thrown by the tenants of the floor above on to the roof below. Notice of the stoppage was given by the plaintiffs to the defendant, but the defendant neglected to have the gutter cleaned out till after the lapse of four or five days from the receipt of the notice, and in the meantime considerable damage had been done to the plaintiff's goods in consequence of the rain-water flowing into their premises. Neither the roof nor the gutters or rain-water pipes were demised by the defendants, but were retained by them in their possession and control. The defendants had never caused the gutters and pipes to be periodically examined and cleaned out, and the rubbish which caused the stoppage of the gutters was the accumulation of years. The court held that the fact of the gutter being under the control of the defendant imposed upon him a duty to take care that it was not in such a condition as to cause damage to the plaintiffs, and that, as he had notice of its being stopped up and neglected to clear it out within a reasonable time after the receipt of the notice, they were guilty of a want of due care, and were consequently responsible for the damage done.

The late Lord Chief Justice Alverstone, in giving the judgment of the Divisional Court upon an appeal from a decision of the County Court judge in favour of the plaintiffs, said that they upheld the decision of the County Court judge. The roof was not demised to the plaintiffs, and neither they nor any of the tenants had any right of access to the roof, nor, in fact, had they ever repaired it or cleaned out the gutter. The damage complained of happened as the result of a gutter in the roof becoming stopped up in October. The plaintiffs gave the defendant notice of the leakage, but the defendant delayed five days before taking steps to have the stoppage removed, and the County Court judge found that there had been a previous leakage in the roof in the preceding July, that the gutter was not clean on the occasion, and that the defendant had never inspected the gutters at any time. He held that, under those circumstances, the defendant was liable for negligence in not periodically inspecting the gutters, and in not acting sufficiently quickly after receipt of the plaintiff's notice in October. It may be, he said, that a covenant by the landlord to repair is not to be implied in respect of those portions of the premises which are actually demised to the tenant, but that was not the case. Here the gutter was not demised, and the question was whether, under those circumstances, the landlord is not under a duty to take reasonable care to prevent a gutter which is under his control from becoming stopped up, whereby damage may happen to the occupants of the floors below. He thought there was, and that, there being evidence of a failure to discharge that duty, inasmuch as the defendant never inspected the gutters, and delayed the repairs even after receipt of the notice, he was liable for the damage which ensued. Even if it were true, as contended, that in such a case no duty to take care can arise, independently of covenant, except in respect of acts of commission, he thought that here the defendant was guilty of an act of commission. A person who maintains an artificial thing like a gutter, used for the very purpose of carrying off the rain-water from the roof, in an improper condition after notice, may be said to be guilty of an act of commission, and he was, in his opinion, under a duty to take care that as a result of that act no damage happened to the occupants of the house. He doubted whether the language of the judges in Miller *v.* Hancock could be supported when they seemed to suggest that the duty which is to be implied in such a case is co-extensive with that which is created by an express covenant—that is to say, that it is an absolute duty to keep the premises in a safe condition at all events, and not merely a duty to take reasonable care to keep them safe.

The cases quoted above refer to the liability of the landlord in respect of a roof which is kept under his control. That of Miller *v.* Hancock ([1893] 2 Q. B. D. 177) illustrates the same principle when applied to a staircase under similar conditions. The defendant was the owner of a building in the city, the different floors of which were let by him separately as chambers or offices, the staircase, by which access to them was obtained, remaining in the possession and control of the defendant. The plaintiff, who had, in the course of business, called on the tenants of one of the floors, fell, while coming down the staircase, through the worn and defective condition of one of the stairs, and sustained personal injuries. The plaintiff sued the defendant in respect of the injuries, and the Court of Appeal held that there was by necessary implication an agreement by the defendant with his tenants to keep the staircase in repair, and, inasmuch as the defendant must have known and contemplated that it would be used by persons having business with them, there was a duty on his part towards such persons to keep it in a reasonably safe condition, and the action by a stranger was therefore maintainable.

Lord Esher, M.R., said the defendant was the owner of a building consisting of several floors, and the rooms on the first and second floors respectively were let as separate tenements to different tenants. He did not let the staircase, which was the only mode of access which the tenants had to their respective tenements, and it therefore remained in his possession and control. The right of the tenants to use the staircase under such circumstances might be called an easement; but it was, in his opinion, such an easement as the landlord was bound to keep so as to afford a reasonably safe entrance and exit to the tenants. It seemed to him that there was an implied obligation on the part of the landlord to the tenants to that effect, or else he was letting to the tenants that which would be of no value to them. What, he asked, is the use of a second floor to any one if the staircase by which alone there can be access to it is to be allowed to go to ruin? Furthermore, it was obvious that in such a case the landlord must know that the premises so let would be of no use to tenants unless those who supply or deal with the tenants—such as tradesmen or others having business with them—also have access to the premises. Under those circumstances he thought that there was a relation between the landlord and those who resorted to the premises for business purposes, from which a duty arose on the part of the landlord to keep the staircase, which is the means of access to the premises, in reasonably safe repair. In the case of Smith *v.* London and St. Katherine Docks Company the defendants, a dock company, provided gangways as a means of access to ships lying in their docks in the ordinary course of business. There was therefore an implied contract to provide the gangways not only for the use of the crew but also for other persons having business with the ships. The Court, in that case, said that the defendant must have known that they would be used by such persons, and, that being so, there was a duty on their part towards persons, between whom and them there was no other relation than that created by going on board the ship on business, to have such gangways in a safe condition. Similar reasoning appeared to him to apply to the present case.

Lord Justice Bowen, in his judgment, said the plaintiff was a collector for a railway company who had, in the course of business, called upon the tenants of one of the flats, and who, in coming down the staircase from their premises, fell down through a defect in the stairs, and broke his leg. The liability of the landlord appeared to him to be clear, both on reason and authority. He let the flats to tenants, but kept the staircase in his own occupation and under his own control. The tenants could only use their flats by using the staircase; the defendant, therefore, when he let the flats, impliedly granted to the tenants an easement over the staircase, for the purpose of the enjoyment of the flats so let. The defendant contended that, according to the common law, the person in enjoyment of an easement is bound to do the necessary repairs himself. That may be true with regard to easement in general, but it is subject to the qualification that the grantor of the easement may undertake to do the repairs either in express terms or by necessary implication. This is not the mere case of a grant of an easement without special circumstances, and it seemed to him that it would render the whole transaction inefficacious and absurd if an implied undertaking were not assumed on the part of the landlord to maintain the staircase so far as might be reasonably necessary for the enjoyment of the demised premises. From this it followed that the landlord had given the tenant a right to use the staircase, and had himself undertaken to keep it in repair. He knows, too, that persons who have business with the tenant will be coming up and down the stairs, and those persons will use the stairs on the understanding that they may lawfully do so, and that, in doing so, they would be shielded by the responsibility of the person on whom the liability to repair the staircase rested, and a duty was imposed by law upon the landlord towards using the staircase in the course of business with the tenants to keep it reasonably safe.

LAW REPORTS.

OFFICIAL REFEREE'S COURT.
(Before Mr. POLLOCK.)

Claim under a Lease: Collins *v.* Knowles.

MR. PERCY ALFRED COLLINS, of Uxbridge-road, Ealing, and Mr. Hugh de Pinquet Collins, of Poplar Farm, Cransford, Suffolk, on Tuesday, January 18, claimed from Mr. Guy Knowles, of Park Lodge, Albert-gate, Knightsbridge, in respect of rent and repairs at the determination of a lease of premises at Scrubb's-lane, Hammersmith. By lease dated March, 1904, the defendant took a factory and two dwelling-houses of the plaintiffs. The premises were new, having only been built in 1900, and therefore, said counsel, were presumably in good repair at the time the defendant took them. The defendant, in accordance with the terms of the lease, determined the tenancy in March, 1914, having sub-let them to Idris Carr, Ltd., and it was alleged against them that they had not kept them in proper repair, and that at the time they gave up possession there were due £91 for a quarter's rent and £29 15s., being double rent for the period during which they remained (from March 24 until April 9) after their term expired. The defendants admitted the £91 for a quarter's rent, but disputed the claim for £29 15s., alleging that they were unable to complete the necessary repairs which were in progress by March, and that the plaintiffs had agreed to allow them to remain to complete, provided they held themselves responsible for accruing rent, but not for the double rent. The £91 for the quarter's rent was paid into Court.

The evidence as to the condition of the premises was conflicting, and the Referee, in the result, found for the plaintiffs, awarding them £220 18s., including the money paid into Court.

OFFICIAL REFEREE'S COURT.
(Before Mr. VEREY.)

Claim by Builders: Maurice Fisher & Co. *v.* Lipowski.

THE plaintiffs in this case were a firm of builders carrying on business at Rayleigh, in Essex, and they claimed £79 12s. 4d. for work done and money expended at the request of the defendant at Turret House in the village of Hockley, near Rayleigh. The work was done between November, 1914, and May, 1915, an four separate accounts were sent in to th defendant in respect of it, some for labou and others for materials. Payments o account were made from time to time, leavin the balance claimed. There was no contra in writing, but plaintiffs, through the counsel, said that the work was done upo instructions received verbally from the d fendant. The total amount for labour an materials was £229 12s. 4d., of which £1 had been paid, leaving the balance £79 12s. 4d. The defendant, on taking Turr House in October, 1914, was brought in touch with the plaintiff firm, and at first h only wanted some small repairs done, but a time went on his requirements were added t and he personally gave his orders to th plaintiffs, so that there were no letters written contract to be relied upon.

A considerable amount of evidence was take on both sides, and in the result the Refere found for the plaintiffs for £76 9s. 7d., wit costs.

CHANCERY DIVISION.
(Before Mr. Justice YOUNGER.)

Newcastle Builder's Motion: Mair *v.* Glennie.

HIS LORDSHIP on January 18 delivere his reserved judgment in a motion b the plaintiff in the case of Mair again Adam Glennie, for a writ of attach ment against Mr. Glennie for breach an injunction, whereby he was to refrain fro carrying on business by himself, his servant or his agents as a lift builder, engineer, millwright, or to be engaged or intereste directly or indirectly, in any firm or compa carrying on such types of business in Ne castle or within 20 miles of the Town Ha in that city during a period of ten years fro the date a partnership between the parties w dissolved. Mr. Glennie was also to refrain all respects from seeking to compete with th plaintiff, who carries on business in Newcastl

The action in which the injunction w granted was one brought by Mr. Mair, li builder, etc., of Newcastle, to restrain brea by the defendant of covenants contained the deed of dissolution of partnership, ar the injunction granted, so far as it went, w in the terms of the covenants contained in th deed. The circumstances of the defendant alleged contempt of Court were that M Glennie, who now carries on business as lift builder at Middlesbrough, was invited June last by the Architects' Department, Newcastle, of the Co-operative Wholesa Society, Ltd., for a lift to be installed premises of the Seaham Harbour Co-operati Society at Horden. He tendered, and w successful, hence these proceedings.

These circumstances of the case were ou lined by his Lordship in his judgment, and went on to say that the Architects' Departme at Newcastle was, in fact, carried on by a M L. G. Ekins, an architect in the exclusi employment of the Co-operative Wholes Society, and the department acted for t Seaham Harbour Society.

The premises at Horden (continued t Judge), where the lift was to be erected, we in fact, within the prohibited area, but wh Mr. Glennie tendered for the work he believ —and his Lordship thought he had reasonal ground for believing—that the premises we really 23 miles from Newcastle and therefo outside the area. It had not been suggest by Mr. Mair that the defendant was not un a *bonâ-fide* mistake on this point, and wh the mistake was pointed out to him he only at once recognised it and abandoned contract, but interested himself in securing contract for the plaintiff.

To commit the defendant to prison for su an unwitting breach of the injunction was, course, out of the question, and it would oppressive in the highest degree. The mot was, in fact, brought and pressed for anot purpose altogether. The plaintiff's case that, assuming Mr. Glennie did believe t the lift was to be placed at premises outs the prohibited area, and the building ow and lessee resided outside the area, it was a breach of the injunction to send in a ten to the owner's architect at Newcastle, a none the less because the tender was sent response to an invitation by the architect. other words, the plaintiff's view of the inju tion was that the defendant was thereby bo to refuse every offer of business of the k prohibited if the offer emanated from a per whether principal or architect, at an add within the radius.

his Lordship's opinion, Mr. Glennie's in this case, in communicating as he did he architect and making his tender, was lf, in the circumstances, no breach of the His only breach was that the lift which oceeded to construct was—although he ot know it—within the prohibited area. hat unwitting act of disobedience the lant ought certainly to be excused. He at, on the whole, the plaintiff had been hat oppressive in these proceedings, and would be done if no order was made on the motion or as to the costs.

The London Building Acts: District Surveyor's Fees.

the Tower Bridge Police-court on the lt. Mr. Gill gave his decision on a ons for the recovery of District Sur- s fees in respect of an irregular build- structure that had been removed.

summons was taken out by Mr. Bernard e, District Surveyor for Newington, t Mr. G. Warren, of 42, Harper-street, Kent-road, for the recovery of 15s., ct Surveyor's fees according to the le to the 1894 Act. The case was heard 13th ult., when evidence was given to ffect that the District Surveyor on 3, 1915, discovered that an irregular n building or structure, covering the of the yard in the rear of 42, Harper- had been erected by the defendant it notice to the District Surveyor. As uilding was entirely irregular, and no val under sect. 82 to the erection of the ng or structure had been granted by the n County Council, the District Surveyor equired it to be removed, and as the the defendant had removed it. An it for the fee was subsequently delivered endant. The points that Mr. Gill was lly called upon to decide were whether the ct Surveyor was the proper person to the irregular building or structure to be ed, and whether the building or struc- having been removed, instead of being led to comply with the Act, the District vor was entitled to the fee according to hedule.

Gill took time to consider his judgment, ecided in favour of the District Surveyor, ade an order for the payment of 15s., s. costs.

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T IN WAR MEMORIALS.

Civic Arts Association was inaugurated Mansion House on Friday last week, he Lord Mayor as President, Mr. George n, R.A., Professor W. R. Lethaby, , Sir Cecil Harcourt Smith, and Mr. d Warren, F.S.A., as Vice-Presidents; Committee, including Mr. John Lavery, , and Mr. Frank Dicksee, R.A.

Lord Mayor, who presided, said that in of the existence of other societies the lt need of this new organisation had onclusively established. The war had he matter one of urgency, for there was bt that at the close of hostilities there be a vast demand for monuments— l, regimental, and personal, and that d must be met in a manner which would credit on the arts and crafts of the m. Therefore the organisers were not ent too soon in making preparations. nemorials were the first concern, but vould also be scope for schemes of town g, in which order and beauty must have d proper recognition.

Beauchamp moved that the Civic Association be formed. He said the tion should encourage local authorities as well as train, local artists. Most of ad opened art and technical institutes, turned out excellent craftsmen; but, nately, when they wanted some work executed they came to London. He ot understand why people who bought s painted hundreds of years ago should d art patrons. He wished to see more given to contemporary art, and ly more encouragement given to crafts- It was important also that the crafts- ould be given due credit for his work. the worthy war memorials which he hoped would be provided under the advice and guidance of the Association were one to Belgium and another to France expressive of our undying gratitude to the peoples of those countries for their share in the war.

Professor Selwyn Image advocated the formation of local consultative bodies to take matters into preliminary consideration and to make use of the large amount of local talent which undoubtedly existed but too often starved.

Professor Lethaby, anticipating adverse criticism, declared that most of the work of the world had been done by busybodies. He pleaded for art in its practical aspects. After all, great pictures painted themselves, but streets did not light themselves and railway stations did not tidy themselves up. He urged that every town and village should form a committee of public welfare, and that every city should have a society like the excellent London Society to look after its amenities. The arts that mattered and needed cultivation were the civic arts. They were the arts of civilisation, and the arts of civilisation were civilisation itself.

Mr. George Clausen, R.A., said that several members of the Royal Academy, including the President, were in sympathy with the objects of the Association, and most earnestly hoped that before very long there would be given at the Academy an exhibition of arts and crafts. It was generally recognised that the impulse to revive arts and crafts, which was now being felt all over the world, had originated in England; and, though our painting, sculpture, and architecture were looked upon by foreign artists as nothing out of the way, they agreed that what was interesting and typical in English art was to be found in the work of the small band of men who were reviving and continuing the old domestic arts of the country. As a rule our people did not know of the great ability in domestic arts which was to be found in this country, and he welcomed an Association which would bring it to the general notice.

Mr. St. Loe Strachey said there was nothing more difficult to write and yet nothing more necessary than a good inscription on a public monument. He suggested that besides committees to superintend the work of the figurative arts they should have a committee of men of letters to give advice, assistance, and criticism as to what should be said on local monuments.

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OBITUARY.

Mr. C. F. Mitchell.

The death, on January 28, at his residence, "Seeburg," Faraday-road, Acton, W., after a short illness, is announced of Mr. Charles Frederick Mitchell, aged fifty-six years, who for the past twenty-five years was headmaster of the Technical Day School of the Polytechnic Institute, Regent-street, W. He was also headmaster of the evening school of the Polytechnic School of Architecture and Surveying and lecturer upon Building Construction at the Polytechnic Institute. He became a member of the Architectural Association in 1891, and was a member of the Society of Architects. Mr. Mitchell was the author, with the assistance of Mr. George A. Mitchell, A.R.I.B.A., head of the Polytechnic Day School of Architecture, Surveying, and the Building Trades, of "Building Construction and Drawing" and of "Building Construction (Advanced and Honours Courses)," Parts I. and II., of which the eighth and seventh editions respectively were published in January of last year; of "Brickwork and Masonry," of which a second edition, revised and much enlarged, appeared twelve months ago; and of "Classic Architecture: A series of Ten Plates Illustrating Typical Examples of the Grecian and Roman Orders," with descriptive letterpress, 1901. The funeral service was held at St. Saviour's Church, Ealing, on Wednesday, February 2.

Mr. W. G. Jones.

The late Mr. William George Jones, of Woking, whose death we announced in our last issue (page 88 *ante*), practised for a while in co-partnership with Mr. A. H. Clinton, of Woking and Farnborough, as architects and surveyors, under the style of Messrs. W. G. Jones & Clinton. The firm was dissolved in June, 1905. Mr. Jones subsequently took into partnership Mr. S. Hunt, under the style of Messrs. Jones & Hunt, of the Broadway, Woking. The partnership was dissolved four years ago. Mr. Jones was the architect of many houses and business premises in Woking and round about.

Mr. W. Whymper.

The death, on January 28, at Esher, is announced of Mr. William Whymper, A.R.I.B.A., aged thirty-two years, elder son of Mr. W. N. Whymper, of Long Ditton, Surrey.

Second-Lieut. T. B. D. Hough.

Second-Lieut. Topham Beecher Dalridge-Hough, of the 8th Yorkshire Regiment, who was killed in France on January 16, aged nineteen years, was the only child of Mr. Topham Hough Hough, of Bridlington. He was educated at Colet Court (St. Paul's School), Hammersmith, and Bridlington Grammar School, where he won several prizes for art. He became a probationer of the Royal Institute of British Architects, and in September, 1914, was gazetted to the East Yorkshire Regiment; he went to France four months ago.

Second-Lieut. A. T. East.

Second-Lieut. Alfred Tomlin East, 3rd Sappers and Miners, I.A., who died in Mesopotamia on December 25 of wounds received at Kut-el-Amara, was the only son of the late Sir Alfred East, R.A., and Lady East. He was educated in Westminster School, and became an Associate member of the Institution of Civil Engineers. He was employed upon the Birmingham Waterworks scheme, the Bombay Municipality Waterworks, and the Assam–Bengal Railway. In August, 1914, he joined the Indian Marines at Bombay, and then the Indian Army Reserve of Officers, being posted to the 17th Company, 3rd Sappers and Miners.

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APPRENTICES.

In reference to the letter under the heading of "Apprentices," which appeared in our last issue, it should have been stated that the writer, Mr. T. Costigan, is the Secretary of the Institute of Builders, Koh-i-Noor House, Kingsway, W.C.

THE WHOLESALE TRADERS' ASSOCIATION FOR THE PROTECTION OF THE HARDWARE INDUSTRIES, ETC.

The thirteenth annual meeting of this Association since its incorporation was held at the Registered Offices, 26, Corporation-street, Birmingham, on the 17th ult., when Major J. H. Cartland, J.P. (Messrs. J. Cartland & Sons, Ltd., Birmingham), presided.

The Chairman, in presenting the Report and balance sheet, said he was glad to say that the operations of the Association had again been fully maintained, that the members had made extensive use of its various departments which had afforded them exceptional facilities and assistance in many directions in the present crisis, and that 189 members had joined the Association during the past year, bringing the total membership up to 3,082. It was interesting to note that, notwithstanding the war and the fact that a large number of firms were doing Government work and therefore were not seeking to open new accounts, the number of status inquiries sent in during the year had reached the total of 92,173, thereby showing that there was still a good general trade being done by the various manufacturers and merchants throughout the country, and that a large number of orders had been received from foreign and Colonial markets which they were unable to execute at the present time.

It was reported that a Bill was shortly to be introduced in the House of Lords for the registration of persons and firms carrying on business in Great Britain and Ireland, and this is a measure which the Association had long advocated through different channels for some time past.

THE BUILDING TRADE.

NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS OF GREAT BRITAIN AND IRELAND.

THE annual general meeting of this Federation was held on January 26 at the Holborn Restaurant, London, Mr. A. W. Sinclair (President) in the chair. There was a large attendance of delegates.

The thirty-eighth annual Report submitted showed that the total number of local associations affiliated was 182, with an aggregate membership of about 6,700. The present state of the building trade might fairly be described as quiet, but a revival of building on a big scale might be expected at no distant date, and it behoved them to be ready with both men and material to handle it. The question of providing for an adequate supply of labour again engaged the attention of the Administrative Committee at its November meeting, and the Council again urged the importance of federations, associations, and individual firms giving the question of apprenticeship training their serious attention. The comparative statement of wages and hours of labour was no longer published, but the Secretary kept a card record of such changes as were reported to him, and would be pleased to answer specific questions. The *Builder* also published weekly a reliable record of wages current in over 100 of the principal towns and cities. In regard to the forms of contract and sub-contract there were no fresh developments to record except that negotiations for a form of sub-contract for use with sub-contractors employed directly by the sole contractors had been resumed. The present circumstances had somewhat checked the flow of articles of special interest to the building trade; nevertheless the technical papers were making every effort to elucidate such questions as presented themselves. In this connection attention was called to the following articles which have appeared in the *Builder* during the year:—"Demarcation Disputes and their Settlement"; "Looking Ahead"; "The Reconstruction of Belgian Buildings"; "German Industrial Methods"; "Activities of Builders' Organisations"; "Wages in the Building Trade"; "War Prices and War Wages"; "Labour Statistics"; "Voluntary Services by Builders' Associations in War-Time"; "Coming Needs"; "War Bonus Demands"; "The War Loan, its Effect on the Building Trade"; "Departmental Undertakings as Compared with Public Work Carried Out under the Contract System"; and "Damage to Roads by Heavy Motors." At the end of December the amount subscribed to the Belgian Builders' Relief Fund was £1,948 16s. 8d. Complaint was being made as to the lack of equitable consideration shown to contractors by certain of their clients now that contracts taken prior to the war were finishing or being settled up. When war broke out the position in which contractors were thereby placed was brought to the notice of both the Board of Trade and the Treasury. Although it did not seem practicable to cancel existing contracts because of what had happened, contractors were led to believe that clients in general would give equitable consideration to the question of losses on contracts sustained in consequence of the war by contractors who had faithfully carried out their undertakings. In some cases promises to that effect were given. Judging by the reports and complaints received, these expectations were not being realised. Apparently consideration must be shown by contractors to their workmen in the shape of war bonuses because of the abnormal cost of living due to the war; but no consideration was to be shown by the building owner for the contractor, who was doubly penalised by having to pay war bonuses (for which no return in extra output was received) and by having to pay extra for materials (mainly because of the extraordinary naval and military requirements of the Government), notwithstanding the fact that the building owner got the entire benefits of the contract just as though no war existed. Why should the latter not bear a share of the extra cost of his work due to this extraordinary war? In common fairness he ought unquestionably to do so, and it was only a reasonable expectation on the part of contractors that the Government would see that their case was given the same equitable and effective consideration that had been given to other equitable claims, such as, for example, damage by King's enemies in the shape of destruction of property by bombardment of coast towns. The Report dealt also with the questions of damage to roads by heavy motors, reserved occupations, organisation, and relations with the operatives. In connection with the last item it was mentioned that the continued adhesion of fresh bodies to the conciliation scheme and the formation of a representative scheme for dealing with demarcation disputes was a good augury for the future.

The President, in moving the adoption of the Report, said the Executive had diligently devoted themselves to the practical work of the Federation. The Boards of Conciliation were doing splendid work, and they had now formed another body to deal with demarcation disputes. As they knew, there were certain matters in connection with the national form of contract which they wanted altered, whilst the Royal Institute of British Architects would also like certain details altered. They had met the Practice Committee of the Royal Institute of British Architects, and had found that it might be possible to arrange an agreement satisfactory to all parties. For the moment there was a little complication. In Lancashire the conditions pressed very heavily upon contractors owing to local conditions, and the Lancashire people got out a new contract agreement. As a Federation they wanted to avoid sectional agreements of that kind, and when they received a draft of the document they hoped to be able to join it up in one national agreement for the whole of the country. With regard to sub-contracts, the sub-contractors for years had been asking that they might have greater security in their arrangements for finance, and it was perfectly right that those who did the work should have the best security for receiving payment. The builders also desired to be secured against liability coming on them due to no fault of their own or due perhaps to the default of the sub-contractor. But they found in their interviews with the Royal Institute of British Architects that they were not prepared to recognise sub-contracts. They held that the obligations of architects under the present form of the national contract were great enough, but they did say that if it was possible for builders and sub-contractors to devise a form of contract which would not add to the obligations of architects they would be inclined favourably to consider it. The preparation of such a form was proceeding, and it was hoped before long it would be ready for presentation to the Royal Institute of British Architects. The law with regard to damage to roads by heavy motors was in a very unsatisfactory state, and they had cases where the contractor had had to pay as much as 10 per cent. of the contract sum for such damage. They were endeavouring to secure an alteration of the law so that the builder might know where he was.

Mr. W. Shepherd (London) seconded the motion and touched on the Report of the Employers' Parliamentary Council. That body had practically only held a watching brief with regard to legislation during the year. They would have noticed with interest the difficulties the Government had encountered from labour in consequence of the various activities which had been forced on them by
the war, due to the class legislation pass
recent years. It might be that in the
the Government, having had to face
difficulties, would be more sympathetic
the employers in their troubles.

Mr. Foster (Burnley) urged that the P
mentary Council should prepare a polic
dealing with labour troubles in the futur

Mr. Moffatt asked what was the p
position of contract matters with rega
local authorities and also for some more
with regard to the trade and res
occupations.

The Chairman said that there were
such as those trained in estimating, for
and others who were absolutely indispe
to the builder if he was to continue his bu
but they had failed to get them placed
list of reserved occupations.

The Secretary said the Sub-Com
dealing with local authorities and their
ments were drawing up a draft form, and
hoped to report at the next meeting.

Belgian Builders.

The President thanked the meeting f
response to the appeal for the Belgian
and said the Secretary had been indefat
in trying to find work for the men.

Mr. Thomas (Cardiff) and Mr. S.
(Newcastle-on-Tyne) reported the result o
interview with Mr. Holloway, the Di
of the Building Department of the Minis
Munitions, and Mr. J. Hunter, of the
Construction Department, with referen
finding employment for Belgian bu
The result of the interview was that Mr.
had undertaken a contract for the er
of 100 houses on the Tyne on which emplo
will be given to all Belgian builders who
to accept employment. Mr. Easten
if he found the cost of the Belgian w
was greatly in excess of that of his own
men he would have to finish the house
his own workmen, but he would giv
Belgians every opportunity of workin
he made any profit on the work of the B
he would give half of it to the Belgian
If there was any loss he would bear
pay the men a fair remuneration for the
they did. Mr. Hunter had given hi
introduction to his manager at Tynesid
it was hoped to get employment for
Belgians in steel construction work.

A resolution was passed appealing
trade still further to support the Relief

Pre-War Contracts.

Mr. E. J. Brown (London) move
following resolution:—"That the offic
the Federation be requested to consid
question of pre-war contracts at a very
moment; to collect as much evidence as p
from members of the Federation, and t
steps to place the whole matter befo
Government, with a request that seriou
sideration be given to it with a view to as
contractors to carry out their obliga
He said that if anything was to be don
matter like this, the question must be ta
by a strong, powerful body like the Fed
in a whole-hearted way. He had evid
tweny-five cases of contractors affec
London alone, and it was quite evide
many members of the Federation ha
hit very hard indeed. Some of the
affected contracts which ran into h
of thousands of pounds, and there see
intention of any redress of the grieva
the poor contractors who entered int
contracts, never dreaming there was g
be a war within a short period of sig
contract. The employers who were get
who had got the work done paid
whatever, and apparently had no in
of paying anything towards the increas
to which the contractor had been p
failed to understand why such cases
come under the War Emergency A
practically speaking, the Governme

ımandeered the labour and the goods. ces were advanced all round, and some of works under the sub-contracts were costing n 50 to 60 per cent. more than before the , and yet there was no legislation which e the contractor the opportunity of re- ping himself. At Newcastle in May, 1915, Prime Minister said the taxpayer must ıpensate firms who, through no fault of r own, had to suffer for the general good. presumed that Mr. Asquith would adhere that statement, and it meant that if an ployer of labour lost through the war through fault of his own he would be recouped by taxpayer. On November 25 Mr. Touche ıght a case in the City of London before Chancellor of the Exchequer. It was a tract for £200,000, and the ground landlord ised to postpone till after the war and sted on the contractors fulfilling their agements and paying a ground rent of nething like £5,000 and erecting new ldings. Mr. Touche inquired whether the vernment would introduce legislation to eve the contractor in such a case, but Mr. Kenna replied that it did not come within department. In December the question asked of the Prime Minister, who said that case was under the consideration of the vernment, but he was not in a position to an answer as to whether legislation would introduced. He said he would receive resentations, but the feeling of the London ociation was that it was no use going on h that one case. They therefore asked nbers to supply them with particulars of er cases, and already they had twenty-five. y then thought that it was better to bring whole matter to the Federation, as there st be many other contractors who had been quite as hard. The Government were ady paying war bonuses to meet extra costs buildings put up during the year, which wed at once that they recognised the ease of cost, and obviously those who were ting up buildings under pre-war contracts e making considerable losses. He was l aware that there had been frightful waste the case of Government building. They members in London who had been erecting ses for the workers where six men were ng one man's work and only about half ng that. There were at least four or five es as many men on the work as there was k for, and from ten to a dozen sub-foremen en two would have been sufficient. Those ıgs clearly indicated that there had been ic legislation on the part of the Government get their work done, but there had been a t flagrant refusal to put work out in the nary channels to a contractor under tender, pite the fact that there were thousands of tractors in the country who would have n pleased to have done the work at a *bonâ-* rate and at a proper profit. Under those umstances they surely had a right to ask some redress to contractors who had to y out contracts entered into before the .

r. N. R. Stirling (Liverpool) said that in North-Western Federation they discussed matter twelve months ago, and sent a lution to the Administrative Council asking he Government could not be pressed to g in legislation to relieve pre-war con- tors. The reply was that they did not see what way anything could be done. He many instances which he could give similar hat mentioned by Mr. Brown.

r. F. L. Dove (London) seconded the ion. He was, he said, sanguine enough believe that if the matter was handled tly they would get some redress. He posed that 90 per cent. of the builders he country were affected by pre-war con- ts. He knew that in certain contracts n for the Government the Government certainly gone some way to help the ractor. The people, however, whom they chiefly up against were the county ncils and local authorities and boards of dians, most of whom had assumed a *possumus* attitude. The Government were ing an enormous amount of pressure on e bodies to shut down their works. At instigation of the Government entirely the don County Council were stopping the erection of a large asylum, the contract for which ran into several hundreds of thousands of pounds. They had come to terms with the contractor, and had arranged to release £10,000 of the £20,000 retention-money; to pay the cost of all work done up to date; to give him £8,000 compensation at once and another £8,000 when he started again on the work. He believed that if the matter was properly laid before the Government they would do something.

The President remarked that the Council had a great deal of information regarding fifty or more cases. It was not, however, a subject which could be dealt with in detail by such a large meeting.

Mr. W. Shepherd (London) said he thought that the best way to approach the Government would be by a carefully-worded memorial to the Prime Minister.

Mr. S. Easten (Newcastle-on-Tyne) said he would like to know if it was intended to ask for relief for contractors who had been engaged on public work or to include compensation for those engaged on private contracts.

The President said he took it the position was that where a builder had suffered from the conditions arising out of the war through no fault of his own some recompense should be made.

Mr. Foster (Burnley) said he would like to know why it had been necessary to wait for that meeting. The reason the operatives got all they wanted was because they had an organisation which existed to watch over their interests.

Mr. Waring (Neath) said the South Wales Federation had sent up a strong resolution on the matter. Speaking as one who had been very hardly hit by pre-war contracts, he hoped the National Federation would show the various centres that it was a real live body and that it would make a great effort to obtain some redress for the losses incurred.

Mr. Chessum (London) pointed out that the resolution did not cover the case of contractors who had met their obligations under pre-war contracts. They wanted to recoup those people.

Mr. F. Higgs (London) suggested that Mr. Brown should alter his resolution to read, "so that contractors may be recouped for losses incurred through war causes on contracts entered into prior to the declaration of war."

Mr. Brown expressed his willingness to accept this alteration.

Mr. Taylor remarked that owing to the action of the Local Government Board local authorities were stopping the execution of contracts, and in his town the architect was making what he considered most unfair terms.

The President said that such cases would come in as being due to war conditions.

Mr. Moffat (Birmingham) said that the matter went back to the August of 1915, when they were called together to consider the question of moratorium. They took counsel's opinion, and it was to the effect that the war did not break contracts, and the advice given to contractors was to make the best terms they could with their particular employers. That advice was followed, and increases were granted in many cases. Mr. Wright, of Nottingham, had asked him to mention one point. Many building contractors had running contracts for materials. Mr. Wright had one which carried him into this year, but the supplying firm, which was a combine, cut off his supplies at the end of 1915 and he could get no more goods except at greatly enhanced prices.

Mr. Davidson (Leeds) said the Local Government Board had sent a circular to the local authorities, telling them that where there was a suspension of works one of the points to be considered was the treatment of contractors. He knew of two cases of pre-war contracts where the local authorities absolutely refused to give any consideration whatever to the contractors. Since the war started their members had been warned to put a clause in their contracts providing that any increase in cost of labour and materials consequent on the war should be allowed. He knew of four contracts entered into since the war with a local authority. In two cases the contractors inserted this clause, and in the other two cases they did not, and in those latter cases the local authority absolutely declined to give a single penny.

Mr. S. Easten said he thought the terms of the resolution were too wide. If they asked the Government to take into consideration the extra cost falling on contractors for Government work that was something definite and they might consider it favourably. If they asked them to go a little further and give instructions through the Local Government Board that the local authorities should reasonably consider the suggestion, then they might get them to do it; but he could scarcely imagine the Government entertaining the idea of giving compensation to builders who had lost money by building on private works. He thought it would be well to limit their demands, and therefore proposed the following amendment to the resolution:—"That the officers of the Federation be requested to consider the question of pre-war contracts at a very early moment; to collect as much evidence as possible from members of the Federation, and to take steps to place the whole matter before the Government with a request that serious consideration be given to it, so that contractors may be recouped for losses incurred through war causes upon contracts entered into with the Government and with public authorities prior to the declaration of war."

Mr. J. W. White (Sunderland), in seconding the amendment, said he thought that perhaps the Government might put them in the position of being able to suspend work on private contracts. Where the private owner would not in some way meet the extra cost it was only fair that the builder should be allowed to suspend work until after the war.

Mr. J. Croad (Gosport) remarked that in his opinion they ought first of all to approach the Treasury on the matter.

Mr. Shepherd contended that if the relief was right in one case it was right in another. The relief would have to come out of the pockets of the taxpayer, and it was illogical to say that those doing public work should be relieved whilst those doing private work who suffered from the same causes should not be relieved.

Mr. Renshaw (London), as a "whole hogger," supported the motion, and said he thought it would be possible to set up a court to which all the cases could be referred.

The amendment was carried on a vote by forty-seven to thirty-one.

Mr. Brown said he was astonished to find that contractors had so little sympathy with their fellows that they would assist those having public contracts to recoup themselves, but would refuse to assist a man on the other side of the street who had suffered loss by a private contract. He thought they met as a National Federation to help one another.

Mr. Easten remarked that he thought Mr. Brown should give credit for unselfishness to those who differed from him. Personally, he was not interested to the extent of a single penny in public contracts, but he was affected by the conditions in a private contract for £64,000. His feeling was that if the Government recognised their responsibilities it would put him in a strong position to approach his private owner. If they had carried the resolution he did not believe it would have had a moment's consideration.

On the President proceeding to put the amendment as the substantive motion, Mr. J. Bowen (Birmingham) proposed the following amendment:—"That the officers of the Federation be requested to consider the question of pre-war contracts at a very early moment; to collect as much evidence as possible from members of the Federation, and to take steps to place the whole matter before the Government, and that the question of the scope of the representations to be made shall be left to the discretion of the Committee."

Mr. W. F. Wallis (Maidstone) seconded.

The President remarked that it might happen that further information might come in and the Committee might think well to work on certain lines.

Mr. Easten said the Committee would know the feeling of the meeting, and therefore he would not oppose the amendment.

Mr. Bowen's amendment was then carried as the substantive motion, and a resolution was carried authorising the Council to co-opt four members from the general body of members to assist the officers in the matter.

Boards of Conciliation.

The meeting decided to accede to the following applications for affiliation to the National Scheme of Conciliation:—Navvies, Builders' Labourers and General Labourers' Union, Amalgamated Slaters' and Tilers' Provident Society, National Union of Gas Workers and General Labourers of Great Britain and Ireland, United Order of General Labourers of London, National Union of Operative Heating and Domestic Engineers.

An application by the National Federation of Slate Merchants, Slaters, and Tilers was referred to the Administrative Committee for further consideration, the President explaining that they were not an operatives' society.

Mr. Renshaw called attention to several instances in which the experience of the London Association in regard to the Board of Conciliation had not been satisfactory, and said they ought not to permit the Boards to be used for making operatives pay their arrears of subscriptions to their unions.

Mr. Davidson (Leeds) asked what the position was with regard to the resolution passed at the Leeds meeting giving associations the option of relaxing the rules of the Board. In Yorkshire they had had instances of men going on strike and the leaders had not ordered them back.

Mr. Storrs said the position was perfectly clear. It was found in certain areas that men were being attracted to munitions work in consequence of the high rate of pay, and the employers were prepared to increase their wages at once instead of waiting for the notice according to the rules, and to meet these cases an option was given to local associations to relax the rules. His own experience had been that where the option had not been exercised the men's leaders had obliged them to abide by the rules. He believed that after experience London would find the Conciliation Boards as beneficial as they had in the North.

On the motion of Mr. Hope, a vote of thanks was passed to Mr. Storrs for his work in connection with conciliation.

Wallpaper Discounts.

On the recommendation of the Executive Council it was decided that Messrs. Foster, McHugh, and Renshaw, and a member of the Lancashire Federation to be selected, be the representatives of the National Federation for a further conference with the merchants and manufacturers on the question raised by the reduction of the well-established trade terms allowed hitherto in respect of wallpapers.

Apprenticeship.

The President explained that a Sub-Committee was considering the apprenticeship scheme of the Institute of Builders and also a scheme of their own, and hoped to bring up something helpful to the trade.

Mr. Renshaw said there had been some correspondence in the *Builder* on the matter, and the Institute of Builders had drawn up a full statement of their ideas on apprenticeship which they were asking the Press to publish.* He believed their ideas could be carried out in many of the large towns, and he asked for a careful consideration of the scheme.

Mr. Cooke (Preston) and Mr. Lloyd (Neath) also urged the importance of the matter.

Commerce of the Empire.

Mr. S. Smethurst (Oldham) submitted a resolution, proposed in his absence by the President, viz.:—"That it be an instruction to the Administrative Committee to consider proposals from associations which have for their object the combining of the federations and trade organisations of this country and the Empire, with a view to protecting, consolidating, and extending the trade of the Empire, and particularly with a view of advising the respective Governments on all matters affecting trading relations and the welfare of the people; and if satisfied with the proposals of any to give their tentative support pending a report to the Council in July next, and that the President and Secretary collect all necessary information for the Administrative Committee."

Mr. Foster seconded the motion, which was supported by Mr. F. C. Rice (London), who suggested the advisability of working with the Associated Chambers of Commerce in the matter.

The resolution was carried.

Elections.

The President proposed the election of Mr. W. F. Wallis as the President for the ensuing year. He referred to Mr. Wallis's long connection with the Federation, and said he was an ex-President of the Institute of Builders and of the London Association of Master Builders. They could look to him to maintain the best traditions of the office.

Mr. E. J. Brown seconded the motion, which was carried.

Mr. Wallis said he first became connected with the Federation in 1891, and they knew how it had progressed since that time.

A hearty vote of thanks was passed to Mr. Sinclair, and he was elected a Vice-President.

Mr. Sinclair acknowledged the vote, and moved a vote of thanks to Mr. A. G. White, the Secretary, and Mr. Wall, his assistant. He said that Mr. White not only put life and energy into the work, but soul also.

Mr. Wallis seconded the motion, which was carried.

Mr. Storrs was elected Senior Vice-President; Mr. Willcock, Junior Vice-President; Mr. S. Easten, Treasurer; Mr. Dove, Senior Hon. Auditor; and Mr. Forsdike, Junior Hon. Auditor.

It was decided to hold the July meeting in Brighton.

GENERAL BUILDING NEWS.

CHURCH, KILLEAD.

A suite of school buildings is now in process of erection in connection with the Killead Presbyterian Church. Mr. J. Hunter, B.E., Lisburn, is architect, and Messrs. Kirkpatrick Brothers, Muckamore, the contractors. When completed the school will contain a main hall, classrooms for boys and girls, and accommodation for the purpose of instruction in the various branches of education. The building will be heated by low-pressure radiators, supplied by Messrs. Musgrave & Co., while the windows will be installed in steel casements provided by Messrs. Williams, of Chester. The main hall will accommodate 400 people, and the school will afford accommodation for 150 pupils.

TRADE NEWS.

The City Surveyor of Sheffield has used Pudloed cement for waterproofing underground lavatory with satisfactory results, and the engineer for the new Ameer's Palace now being built in Afghanistan has used "Pudlo" for waterproofing the cement work.

Boyle's latest patent "air-pump" ventilators have been adopted for St. Paul's Church, Swanley Village, Kent.

The Red Cross Hospital for Wounded Soldiers, Hale End, Essex, is being supplied with Shorland's double-fronted patent Manchester stoves, with descending smoke flues and patent exhaust roof ventilators, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

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NEW COMPANIES.

THE undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

WEPRE HALL BRICK COMPANY, LTD. (142,676). Registered January 10. Nature of business indicated by title. Nominal capital, £2,500 in 2,500 £1 shares.

G. J. JACKSON & CO., LTD. (142,739), 34, Birley-street, Blackpool. Registered January 17. To manufacture, acquire, and deal in munitions of war; to furnish, fit, improve and repair same, and deal in motors, carriages, cycles, etc., electricity, oil, gas, or any other motive power, general engineers, electricians, builders, painters, enamellers, etc. Nominal capital, £2,000 in 2,000 £1 shares.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure th accuracy of the information given, but it ma occasionally happen that, owing to building owners taking the responsibility of commencin work before plans are finally approved by th local authorities, "proposed" works, at th time of publication, have been actually commenced. Abbreviations:—T.C. for Tow Council; U.D.C. for Urban District Council R.D.C. for Rural District Council; E.C. fo Education Committee; L.G.B. for Loca Government Board; B.G. for Board o Guardians; L.C.C. for London County Council B.C. for Borough Council; and P.C. for Paris Council.

Aberayron.—Plans of shop and stores to b erected at Cottage Cross Roads, Llandyssiliogog for Mr. Thomas Jenkins, Llainfran, New Quay have been approved by the D.C.

Aberdeen.—At a recent meeting of the Plan Committee of the T.C. five sets of plans, whic included four self-contained houses and an open air pavilion at Kepplestone, were considered. The other plans were for alterations of existin business premises.

Balrothery.—The D.C. has appointed a deputation to wait on Mr. J. J. Clancy, M.P., an consult as to the possibility of obtaining mone to complete their late labourers' scheme so far a concerns cottages contracted for.

Batley.—It has been decided to extend th accommodation for wounded soldiers at Batle and District Hospital to 100 beds. The schem is estimated to cost £4,500.

Bedford.—Plans passed by the T.C.:—A application from the Postmaster-General for th consent to the erection of an overground line c telegraphs along Rothsay-road from the Embankment to Waterloo-road has been granted by th T.C.

Bexhill.—The T.C. has sanctioned the following plans:—Bungalow, Westcliff-drive (Messr Tubbs, Messer, & Poulter), Lieut.-Colonel G. E Watson; bungalow at the Highlands, Turkey road (Mr. J. H. Lye), Messrs. Gordon Green Webber; garage at "The Moorings," Beaulieu road (Messrs. Tubbs, Messer, & Poulter), Colon W. L. Davis; motor-house at "White Lodge, Collington-lane (Mr. J. H. Lye), Mr. L. Russell garage and porch at "Seafield Cottage, Cooden-drive (Mr. H. W. Hetherington Palmer Mr. G. B. Gregor Grant.

Carlisle.—The Carlisle Health Committee ha agreed to present to the Corporation an amende housing scheme, including, as suggested by th L.G.B., houses with three bedrooms instead two, as originally decided upon.

Cardiff.—The Cardiff Tramway Committe have considered the question of water suppl from Roath Brook, and they have instructed th City Engineer to prepare plans for damming th brook and conserving the water supply in pond They have also decided that the scheme f increased yard accommodation by the coverin over of the Roath Brook should be proceede with; the estimated cost is £500.

Chelmsford.—The T.C. has passed plans f new offices and premises at the corner of Duk street and Market-road for the Prudenti Assurance Company, Ltd.

Colombia.—The *Diario Oficial* (Bogotá) November 11 last publishes the text of a No from the *Junta Central de Higiene* to th Colombian Government relative to the sanita measures which should be taken at the port Buenaventura in view of the prevalence there yellow fever. It is stated that, in addition undertaking disinfecting operations and an acti campaign against mosquitoes, many houses w have to be demolished and reconstructed hygienic lines, streets repaved, and a comple sewerage system installed. Extensive defen works against the encroachment of the s (which at high tides reaches the dwellings) a also necessary.

Corbridge.—The P.C. has approved plans fro Mr. Waugh for alterations to cottages in Prince street.

Deal and Walmer.—It is intended to build theatre, capable of accommodating about 1,5 people, on the space adjoining Stanhope Hall.

Droitwich.—The scheme for the establishme of a Hospital Saturday Home at Droitwich f the treatment of rheumatism has been approv by the Board of Delegates of the Birmingha Hospital Saturday Fund.

Dundee.—Plans and sections of the followi new buildings have been lodged at the office the City Engineer:—Navarre-street, Barnhi cottages for Messrs. James Tullis & Sons.

Duns.—The T.C. has granted the petition Mr. James Johnston Cowper, Boston Hou Duns, for warrant to erect a dwelling-house 3, Teindhill-green, and relative plan; also application made by Mr. Coupland for permissi to erect a small motor garage on ground secur by him on Bridgend Farm.

Durham.—The C.C. has agreed that, subj to the approval of the Board of Agriculture, Ryhope Grange Farm be leased and adapted small holdings, and that five fields on the Wo house Close Farm, near Bishop Auckland, leased for the same purpose.

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* See our last issue.—ED.

* See also our list of Competitions, Contracts, e on page 114.

zinghall.—The Swedenborgian Society in
ford have acquired a site on the Ashville
at Frizinghall, on the Shipley side of the
boundary line, with a view to erecting a
church and Sunday school there. Building
have been submitted to and approved by
hipley D.C.

sgow.—Glasgow Dean of Guild Court has
ed linings to the North British Locomotive
any, Ltd., to erect a footbridge between
auld-road and the North British Railway
ringburn; the Ioco Proofing Company, Ltd.,
rton Works, Anniesland, to extend existing
ouse and erect a dressing-room there; and
e Fairfield Shipbuilding and Engineering
any, Ltd., to erect an extension at their

msby.—The T.C. has approved plan of
proposed new picture house in Bridge-

res.—The U.D.C. has passed the following
:—(a) Foundry, Clayton-road, Army Motor
es and Waggon Company; (b) drainage of
ene, High-road, Mrs. Cunningham.

caster.—The T.C. has received permission
the L.G.B. to proceed with the borrowing
ney for the extension of the gas works, in
that gas might be provided for the new
in the town.

gtown.—The Longtown R.D.C. has decided
sub-committee should interview represen-
s of the Brampton R.D.C., with whom
is a proposal to co-operate with a view to
g arrangements for the establishment of a
isolation hospital.

lock.—The sewerage scheme for the two
cks is to be proceeded with.

dlesbrough.—The Corporation has approved
plans for new houses. It has also
d to proceed with the work of opening out
road from Thornfield-road to Acklam-

occo.—With reference to the notice in the
of Trade Journal of September 23 last
e to a call for tenders for the construction
lighthouse at Cape Tres Forcas, H.M.
and Consul-General at Tangier (Mr. H. E.
C.M.G.) reports that, as no tenders have
submitted, the work will be carried out by
e contract.

Ross.—The New Ross D.C. has adopted
nth labourers' cottage scheme comprising
hree houses.

ingham.—The British Vulcanite Indus-
Ltd., have acquired some land and
ses at Colwick, the site lying between the
nd and Great Northern Railways, and have
ed this building to their purposes, and
have just been approved for the erection
arge single-story extension.

ippine Islands (U.S.A.).—The Acting
Consul-General at Manila (Mr. T.
ngton) has issued a specification, together
conditions of tender, etc., for the erection
new central sugar mill, etc., at Isabela-
pagan, Philippine Islands.

nerham.—The R.D.C. has approved plans
e new roads on Mr. T. Marrian's estate at
pton-en-le-Morthen.

by.—Plans passed by the U.D.C.:—Mr. J.
for alterations at "Newberry," Hilmor-
ad; Mr. B. Morris, for motor shed at
Clifton-road; Mr. Boyer, for additions at
oplar-grove; Rugby Co-operative Society,
ons to two cottages in Chapel-street;
Lodge Bros., garage and revised frontage
on to factory in St. Peter's-road; Mr. C. C.
for workshop at rear of 162, Murray-

y.—A large oil refinery, an extension of the
ia Oil and Cake Company's undertaking,
be established on Barlby Bank, on the
Riding side of the river at Selby. The
R.C. has a scheme in hand for supply-
lby town water to Barlby parish by laying
steel tubes across the bed of the River
The work is to be proceeded with this
The Selby U.C. has purchased a site for
ection of workmen's houses, and the Coun-
proceed with the erection of the houses as
s they obtain the sanction of the L.G.B.
necessary loans, etc.

n.—The *Gaceta de Madrid* of January 15
s that tenders will be received at the
cción General de Obras Públicas,
erio de Fomento," Madrid, up to
ry 11, for the construction of shelters on
paña wharf in the port of Barcelona, at
imated cost of 705,896 pesetas (about
).

bridge.—It is proposed to make a new
on at Quarry-street Mills, and to rebuild
ern mill on the site of the old building,
y destroyed by fire.

nbury.—The D.C. has approved a plan
e erection of two new villas at Combe
Henbury.

ent.—Plans have been before the T.C. of
picture house to be erected in Tranent
mmodate 700 people.

bridge.—The Building and Sewage Dis-
Committee of the U.D.C. have approved a
an addition to the motor-house at Wing-
ad, for Mr. Golledge.

age.—The R.D.C. has resolved that the
of the Letcombe Regis Drainage Scheme
rarded to the L.G.B., and to apply for
anction to a loan for carrying out the

sop.—Plans passed by the U.D.C.:—
oundations and galvanised-iron office in
-road for the Asiatic Petroleum Company,
rashhouse to premises in Victoria-square
trustees of the late Mr. J. Garside; and
right's shop in Gateford-road, for Messrs.
Ltd.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness.	9¾	10	9¾	9¾	9¾	9¼	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6¼	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8¾	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¼	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¼
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	8¾	8½	8½	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10½	10	10	10	8½	7½	7½	7½
Leicester	10¼	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne.	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½*
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9¼	9½	—	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10.	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10½	9½	10	10	9.	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	10½	10	10	10½	9½	10	9¼	6	6½	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7½	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9¼	9¼	9	8¼	7		

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (✱) are advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, —; Auction Sales, xxiv. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

February 4.—**Dumfries.**—Foundation Work, etc.—For the foundation work and internal plumber work of a new domestic science building to be erected at George-street School for the Dumfries Burgh School Board. Plans, etc., of Mr. J. M'Lintock Bowie, F.R.I.B.A., architect, 53, Buccleuch-street.

February 4. — **Leicestershire.** — Demolition and Rebuilding.—For the partial demolition of the existing two brick arches of Thrussington Bridge, each about 22 ft. span, and the rebuilding of same in ferro-concrete and for the roadmaking incidental thereto for the C.C. Drawings, etc., of the County Engineer, Mr. S. Perkins Pick, 6, Millstone-lane, Leicester. Deposit, £1 1s.

February 7.—**Bailiffe Bridge (Yorks.).**—Confectionery Works.—Erection of confectionery works, including chimney and boiler-house, at Bradford-road, Bailiffe Bridge, near Brighouse. Mr. W. W. Longbottom, Licentiate R.I.B.A., architect, Somerset-chambers, George-street, Halifax.

February 7.—**London.**—Extension.—For concrete foundations and general building work in connection with the extension of power house for the St. Pancras B.C. Electricity Department. Form of tender, etc., of Mr. C. H. F. Barrett, Town Clerk, Town Hall, Pancras-road N.W. Deposit, £1.

February 9. — **Dublin.** — Cottages.—For the building of twelve labourers' cottages at St. Laurence, Chapelizod, for the South Dublin R.D.C. Plans, etc., of Mr. T. J. Byrne, Clerk of the Council, Offices, No. 1, James's-street, Dublin.

February 11. — **Keith.** — Rebuilding. — For rebuilding dwelling-house at Mains of Auchindachy, Keith. Plans and specifications may be seen at the Farm, and at Fife Estates Office, Fife-Keith.

February 15. — **Hull.**—Reconstruction.—For the reconstruction of No. 10 warehouse at Hull for the North-Eastern Railway. Plans, etc., of Mr. A. Pollard, the Company's Architect, at York.

February 15.—**Leeds.**—Painting, etc.—Cleaning down, painting, etc., at various police-stations in the city for the Watch Committee. Specifications, etc., of Mr. W. T. Lancashire, City Engineer, Municipal-buildings, Leeds.

February 15.—**Pegswood.**—Reconstruction of Station.—For the reconstruction of Pegswood Station for the North-Eastern Railway Company. Plans, etc., of Mr. A. Pollard, the Company's Architect, Irving House, Westgate-road, Newcastle-on-Tyne.

✱ February 17. — **Newcastle-on-Tyne.** — Repairs, etc.—The Commissioners of H.M. Works, etc., invite tenders for execution of ordinary works and repairs to buildings in above district for one year.

February 23.—**Oakdale (Mon.).**—Institute.—For the erection of a workmen's institute at Oakdale Village for the Oakdale Institute Committee. Plans, etc., of Mr. A. F. Webb, M.S.A., architect and surveyor, Blackwood, Mon. Deposit, £2 2s.

No Date. — **Nottingham.** — Demolition of Property.—Pulling down and removal of several blocks of buildings on the Carter-gate area, for the Housing Committee. Schedule of the City Engineer, Guildhall, Nottingham.

FURNITURE, MATERIALS, etc.

February 4.—**Belfast.**—Builders' Materials.—Supply to the Midland Railway Company, Northern Counties Committee (Ireland), of builders' materials for periods of six months or twelve months, commencing from March 1 next. Forms of tender of Mr. Ellis, Stores Superintendent, York-road Station, Belfast. Prepayment of 6d. for each form.

February 5.—**Bangor.**—Builders' Materials.—Supply to the U.D.C. of builders' materials for one year from April 1, 1916. Tender forms of Mr. J. Milliken, Clerk to the Council, Town Hall, Bangor.

February 5.—**Chiswick.**—Builders' Materials.—Supply to the U.D.C. of builders' materials for six or twelve months, commencing April 1, 1916. Forms of tender of Mr. Edward Willis, A.M.Inst.C.E., Surveyor, Town Hall, Chiswick.

February 5.—**Dumfries.**—Metal.—Supply to the C.C. (Lockerbie District) of metal for one or more years. Specification, etc., of Mr. Robert Paterson, District Surveyor.

February 7.—**Teddington.**—Tar.—Supply to the U.D.C. of about 35,000 gallons of distilled tar. Mr. G. H. Salmons, Clerk to the Council, Council Offices, Teddington.

✱ February 8.—**Willesden.**—Materials, etc.—The Willesden D.C. invite tenders for supply of materials and execution of work.

February 9.—**Beddington and Wallington.**—Builders' Materials.—Supply to the U.D.C. of builders' materials for the term of one year from April 1, 1916. Specification, etc., of Mr. S. F. R. Carter, A.M.Inst.C.E., Engineer and Surveyor to the Council, Council Offices, Wallington, Surrey.

February 9.—**Belfast.**—Builders' Materials.—Supply to the Directors of the Belfast and County Down Railway Company of builders' materials for twelve months from March 1 next. Tender forms of Mr. H. E. Mellor, Secretary, Queen's Quay Terminus, Belfast.

February 9.—**Stockport.**—Builders' Materials.—Supply to the Highways and Sewers Committee of builders' materials for a period of twelve months from April 1, 1916. Specifications of Mr. John Atkinson, A.M.Inst.C.E., Borough Surveyor, Borough Surveyor's Office, Town Hall, Stockport.

February 12.—**High Carley (Lancs).**—Furniture.—Supply to the Tuberculosis Committee of the Lancashire C.C. of furniture at the High Carley Sanatorium, near Ulverston. Quantities, etc., of the Central Tuberculosis Officer, County Offices, Preston.

February 12.—**Sheffield.**—Builders' Materials.—Supply to the Health Committee of the City Council of builders' materials for a period of one year, commencing March 26, 1916. Forms of tender, etc., on application to the office of the Superintendent of the Cleansing Department and Public Baths, Town Hall.

February 14.—**Eccles.**—Builders' Materials.—Supply to the Corporation of builders' materials for the year ending March 31, 1917. Forms of tender, etc., of Mr. Thomas S. Picton, Borough Engineer and Surveyor, Eccles.

ENGINEERING, IRON, AND STEEL.

February 5.—**Leicester.**—Rails.—Supply to the Tramways Committee of 30 tons of 7-in. steel girder tramway rails. Mr. E. George Mawbey, M.Inst.C.E., Borough Engineer, Town Hall, Leicester.

February 9.—**Ashborne.**—Borehole.—Sinking a borehole of 15 in. in diameter to a depth of 200 ft., more or less, on a site situate at Clifton-road, Ashborne, for the U.D.C. Particulars of Mr. J. W. Twigg, Waterworks Inspector, Derby-road, Ashborne.

February 12. — **Glamorgan.** — Tools, etc.—Supply to the Glamorgan C.C. of tools and ironmongers' goods for one year from April 1, 1916, to March 31, 1917. Forms of tender of Mr. Geo. A. Phillips, County Surveyor, County Hall, Cardiff.

February 14.—**Southampton.**—Heating Installation.—For supplying and erecting a heating installation, by low-pressure hot water, including the provision of radiators, boiler, etc., at the Eastern District School, for the Corporation. Plan, etc., at the Borough Engineer's Office.

No Date. — **Durham.** — Heating.—Supplying and fixing a low-pressure hot-water heating apparatus in their new schools at Blackhall Mill and High Spen for the Education Department. Particulars of the Clerk to the Education Committee, Shire Hall, Durham.

ROAD, SANITARY, AND WATER WORKS.

February 5.—**Daventry.**—Hartshill, Granite, etc.—Supply to the R.D.C. of hand-broken and unbroken Hartshill, granite, Mancetter, or Mountsorrel stones for the repairs of the highways within the district for one year from April 1 next. Forms of tenders of Mr. J. D. Spearing, Clerk to the Council, 4, New-street, Daventry.

February 5. — **Sligo.** — Extending W Supply. — For extending the Loughana water supply with a 2-in. cast-iron pipe for a 700 yds., and executing all other works in nection therewith for the R.D.C. Mr. M Conlon, Clerk of the Council, Court House, S

February 7. — **Beverley.**—Stone.—Suppl the D.C. of about 4,000 to 5,000 tons of ston macadamising their roads. Forms of te etc., of Mr. E. Picker, C.E., Surveyor, Beve

February 7.—**Eston.**—Forming and Pa Streets.—Forming and paving three back st at South Bank for the U.D.C. Plans, etc Mr. O. W. Cockersoll, C.E., Council Of Grangetown.

February 8.—**Lewisham.**—Sewerage W etc.—For the following works and supplie the B.C.:—Ironwork to sewers, etc.; arti stone, sewerage jobbing works, tar paving, material (six months), Portland cement lime. Forms of tender, etc., on applicatio the Town Hall, Catford, S.E., Surve Department.

February 9. — **Chelmsford.**—Refined T Supply to the T.C. of refined tar, require the purpose of tarring roads for twelve m from February 1, 1916. Mr. George Me Town Clerk, Municipal Offices, Chelmsford.

February 9.—**Easingwold.**—Whinstone, Supply to the R.D.C. of whinstone, slag, Tender forms of Mr. F. J. H. Robinson, Cle

February 9.—**Llantrisant.**—Road Works —For the completion of the contract fo Ely Valley-road works, which have been una ably suspended, for the Llantrisant and Lla Fardre R.D.C. Plans, etc., of Messrs. Gom Morgan & Thomas Saunders, engineers, Sc street, Pontyclun. Deposit, £5.

February 9.—**Stockport.**—Paving and R ing Carriageways, etc.—(1) Manual and labour for paving and repairing carriage (2) manual and team labour for masons' on footpaths, etc.; (3) team labour for ca materials other than carting included in Nos. 1 and 2, for the Highways and S Committee. Specifications, etc., of Mr. Atkinson, A.M.Inst.C.E., Borough Surv Borough Surveyor's Office, Town Hall, Stock

February 12.—**Glamorgan.**—Road Mate etc.—Supply to the Glamorgan C.C. of ma and haulage for the year ending March 31, Forms of tender of Mr. Geo. A. Phillips, C Surveyor, County Hall, Cardiff.

February 14.—**Leeds.**—Pipes, Valves, Supply to the Waterworks Committee fo year commencing April 1, 1916, of cast-iron (2 in. to 24 in. diameter), sluice valves (3 10 in. diameter), oils, iron castings, fire hyd ironmongery. Specifications, etc., at the V works Engineer's Office, Great George-s Leeds.

February 15.—**Long Sutton.**—Granite, Supply to the U.D.C. of 400 tons XX g (broken), 300 tons XXX granite (broken tons of ¼-in. granite chips, 100 tons slag s ings. Mr. Samuel S. Mossop, Clerk t Council, Long Sutton, Lincolnshire.

February 16.—**Forfar.**—Road Materials. quarrying or gathering, carting, and bre materials for the repair of the highways Forfar district of Forfarshire, for the District Committee of the C.C. Specifica etc., from the Surveyor, Mr. Alexander Li 12, Reform-street, Kirriemuir.

February 17.—**Wetherby.**—Tar.—Suppl the R.D.C. of refined tar. Mr. E. H. C Clerk to the Council, Wetherby.

Auction Sales.

✱ February 8.—**Alverstoke.**—Mr. H. W. will sell by auction, on the premises, the and plant of a builder and contractor, to with wood-working machinery.

✱ February 15.—**Kingsland.**—Mr. F. G. will sell by auction, on the premises, working and builder's plant and machine

✱ February 17.—**Sloane-square.**—Mr. Smith will sell by auction, on the premis stock and plant of a builder, decorato sanitary engineer.

✱ February 23. — **Bloomsbury.**—Messr Fox, Burnett, & Baddeley will sell by a at the Mart, a freehold building site.

[Those with an asterisk (*) are advertised in this issue.]

ICES CURRENT OF MATERIALS.

**wing to the exceptional circumstances which
ail at the present time, prices of materials
ld be confirmed by inquiry.]**

*nce our last issue wood, lead, and oil prices have been
ased and several other prices altered.*—ED.

Jur aim in this list is to give, as far as possible, the
ge prices of materials, not necessarily the highest
west. Quality and quantity obviously affect prices
fact which should be remembered by those who
e use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
Stocks	2 0 0
ed Stocks for Facings	2 12 0

Per 1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
:ons	1 16 0	BestBluePressed Staffordshire	4 14 0
Fareham ed	3 12 0	Do. Bullnose	4 18 6
RedPressed uabon Facing	5 5 0	Best Stourbridge Fire Bricks	4 14 0
ZED BRICKS—			
;t White, ory, and dt Glazed retchers	12 7 6	D'ble Str'tch'rs	17 17 6
ders	11 17 6	Double Headers	14 17 6
ins, Bullnose id 4½ in. ats	15 17 6	One Side and two Ends	18 17 6
		Two Sides and one End	19 17 6
		Splays and Squints	17 7 6

Second Quality £1 per 1000 less than best.

	s. d.	
nes Ballast	7 9	per yard, delivered.
nes and Pit Sand	8 0	,, ,, ,,
Washed Sand	9 0	,, ,, ,,

Per ton, delivered.

	£ s. d.	£ s. d.
Portland Cement	2 5 0	2 8 0

). £2 1s. alongside in 80-ton lots.
ocrete 2s. 6d. per ton extra on above.
Ground Blue Lias Lime.... 1 3 6 at rly. depôt.
E.—The cement or lime is exclusive of the ordinary charge for sacks.
Stone Lime .... 17s. 0d. per yard delivered.
rbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
H STONE—delivered in railway trucks at estbourne Park, Paddington, G.W.R., or uth Lambeth, G.W.R., per ft. cube	1 7
do. delivered in Railway trucks at Nine ms, L. & S.W.R., per ft. cube	1 8¼
do. delivered on road waggons, Nine Elms epôt	1 9¼
TLAND STONE—	
ewn Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W., per ft. cube	2 5½
). do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2 6½

hite Basebed, 2d. per ft. cube extra.

DOM BLOCKS—Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
aster in blocks..	1 11	Red Corsehill in blocks	2 6
in blocks	1 7	Closeburn Red Freestone	2 2
shill in blocks	2 4	Red Mansfield Freestone	2 9
ey Dale in ocks	2 5		

K STONE—*Robin Hood Quality*.

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
pled random blocks	3 4
Per Ft. Super., Delivered at Railway Depôt.	
. sawn two sides landings to sizes (under ft. super.)	2 5
rubbed two sides ditto, ditto	2 8
n. sawn two sides slabs (random sizes)	2 1
to 2½ in. sawn one side slabs (random sizes)	0 8¼
. to 2 in. ditto, ditto	0 6¾

D YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
pled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landing to sizes (under 40 ft. per.)	2 3
rubbed two sides ditto	2 7
sawn two sides slabs (random sizes)	1 0
self-faced random flags	0 5

TILES.

Per 1000 f.o.r. London.

	£ s. d.
machine-made tiles or hand-made sand-ced tiles from either Broseley or affordshire district	2 12 6
mental ditto	2 15 0
and valley tiles (per dozen)	0 5 6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£ s. d.
Blue Bangor slates, 20 by 10	11 16 0
quality ,, ,,	11 10 0
,, ,, 16 by 8	5 15 0
Blue Portmadoc, 20 by 10	11 13 6
quality ,, ,,	11 3 6
,, ,, 16 by 8	5 15 0

WOOD.

BUILDING REDWOOD.
Imported sizes. Per standard.

	£ s. d.	£ s d.
s: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	28 10 0	29 10 0
n. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	27 10 0	28 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

	£ s. d.	£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	23 10 0	24 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	
Seconds: building quality deals, battens, boards, and scantlings	1 0 0	less than best.
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 8 10 0	—
Seconds do. do.	8 0 0	—
9 in. to 10 in. do.	7 0 0	—
6 in. to 8 in. do.	6 10 0	—

Stocks very limited.

	Per load.	
Sawn pitch pine logs (about 35 cu. ft. average)	10 0 0	11 0 0
Do. 6 in. to 10 in.	8 0 0	9 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	7 0 0
	Per standard.	
Best Pitch Pine Deals	34 0 0	35 0 0
Rio do.	23 0 0	25 0 0
Under 2 in. thick	0 10 0	extra.

JOINERS' WOOD.

White Sea Frst Quality Red: 4 in. by 11 in.	35 0 0	36 0 0
3 in. by 11 in., and 2 in. by 11 in.	34 0 0	35 0 0
4 in. by 9 in.	33 0 0	34 0 0
3 in. by 9 in., and 2½ in. by 9 in.	32 0 0	33 0 0
9 in. by 11 in. boards	1 0 0	more than deals.
7 in. and 8 in. battens	24 0 0	25 0 0
7 in. and 8 in. boards	1 0 0	more than battens.
Seconds quality	2 0 0	less than best.
Third quality	£2 to £3	less than seconds.
Archangel White Deals—		
Best 3 in. by 11 in.	28 0 0	29 0 0
3 in. by 9 in. and 10 in.	26 0 0	27 0 0
Seconds, do.	1 10 0	less than best.
U.S. Battens	19 10 0	20 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.	
1¼ in. by 7 in. planed and shot	1 8 6	1 13 0
1¼ in. by 7 in. planed and matched	1 9 0	1 13 0
1 in. by 7 in. planed and shot	1 3 0	1 6 0
1 in. by 7 in. planed and matched	1 3 0	1 7 6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0 18 0	0 19 6
1 in. by 7 in. do.	1 3 0	1 5 6
⅝ in. by 7 in. do.	0 14 0	0 15 0
	Per standard.	
Columbian or Oregon Pine, best quality	35 0 0	40 0 0
Yellow Pine—First, regular sizes	57 0 0	upwards.
Oddments	39 0 0	,,
Seconds, regular sizes	43 10 0	,,
Oddments	37 10 0	,,
Kauri Pine—Planks per ft. cube	0 7 6	—
Oak Logs—		
Large, per ft. cube	0 6 0	0 6 6
Small ,, ,,	0 5 0	0 5 6
Wainscot Oak Logs, per ft. cube	0 10 6	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	0 1 3
¾ in. do. do.	0 0 10	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	0 2 6
Cuba Mahogany	0 1 6	0 2 6
Dry Walnut, American, per super, as inch	0 1 0	upwards. 0 1 3
French, "Italian," Walnut	0 1 0	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	34 0 0
Do. do. (Java)	25 0 0	27 0 0
American Whitewood planks, per ft. cube	0 6 6	0 7 6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 5 0	21 5 0
Plain Compound Girders, ordinary Sections	22 0 0	23 0 0
Plain Compound Stanchions	23 0 0	24 10 0
Angles, Trees, and Channels, ordinary sections	20 10 0	21 10 0
Flitch Plates	20 10 0	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	14 0 0

(Turning extra.)

METALS (*Continued*).

Per ton, in London.

IRON—	£ s. d.	£ s. d.
Common Bars	16 0 0	—
Staffordshire Crown Bars, good merchant quality	16 10 0	17 0 0
Staffordshire "Marked Bars"	17 0 0	17 10 0
Mild Steel Bars	16 10 0	17 0 0

Steel Bars, Ferro-Concrete quality, £17 10s. basis price.

Hoop Iron, basis price	17 10 0	—
,, ,, Galvanised	30 0 0	35 0 0

(* And upwards, according to size and gauge.)

Sheet Iron Black—		
Ordinary sizes to 20 g.	18 0 0	—
,, ,, 24 g.	19 0 0	—
,, ,, 26 g.	20 0 0	—
Sheet Iron, Galvanised flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29 0 0	—
Ordinary sizes to 22 g. and 24 g.	29 10 0	—
Ordinary sizes to 26 g.	32 0 0	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	30 0 0	—
,, ,, 22 g. and 24 g.	30 10 0	—
Ordinary sizes to 26 g.	33 10 0	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28 0 0	—
Ordinary sizes, 22 g. & 24 g.	28 10 0	—
Ordinary sizes, 26 g.	29 0 0	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 15 0	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 0 0	—
Best Soft Steel Sheets, 26 g.	21 15 0	—
Cut Nails, 3 in. to 6 in.	18 10 0	19 0 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

	£ s. d.	
LEAD—Sheet, English, 4 lb. and up	38 0 0	—
Pipe in coils	38 10 0	—
Soil pipe	41 10 0	—
Compo pipe	41 10 0	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—			
Strong Sheet	per lb.	0 1 5	—
Thin ,,	,,	0 1 6	—
Copper nails	,,	0 1 5	—
Copper wire	,,	0 1 5	—
BRASS—			
Strong Sheet	,,	0 1 3	—
Thin	,,	0 1 4	—
TIN—English Ingots	,,	0 1 10	—
SOLDER—Plumbers'	,,	0 0 10	—
Tinmen's	,,	0 1 0	—
Blowpipe	,,	0 1 2	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
26 oz. thirds	7d.	Fluted Sheet, 15 oz.	5¾d.
,, fourths	6¼d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 10
,, ,, ,, in barrels	,,	0 3 11
,, ,, ,, in drums	,,	0 4 2
Boiled ,, ,, in barrels	,,	0 4 1
,, ,, ,, in drums	,,	0 4 5
Turpentine in barrels	,,	0 4 4
,, in drums	,,	0 4 7
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	45 5 0
Red Lead, Dry	per ton	42 10 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	56 15 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TO CORRESPONDENTS.

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N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ASHBOURNE.—For the erection of new piggeries at the Workhouse, for the Board of Guardians :—

G. Gaunt Ashbourne*	£155

BARKING.—For provision and erection of steel-framed building covered with corrugated-iron, for the Town Council. Mr. R. A. Lay, A.M.Inst.C.E., Acting Surveyor :—

Sanders & Foster	£2,498
Peirson & Co.	1,755
S. E. Moss (withdrawn)	1,645
Foster Construction Co.	1,625
F. Mitchell & Co., City-road, Manchester*	1,565
E. Potterton (withdrawn)	1,527

[Surveyor's estimate, £1,609.]

HANLEY (Stoke-on-Trent).—For extensions to "Victoria Bakery," for Mr. Charles Caudwell. Mr. Wm. Campbell, architect, Hanley :—

S. Salt, Leek, Staffs*	£1,465

DUDLEY.—Accepted by the Corporation for the erection of houses and construction of streets and sewers in connection with the municipal housing scheme :—

Erection of 124 Houses.

H. H. Crump, Birmingham	£31,000

Erection of Ninety Houses.

Dudley Amalgamated Builders, Dudley	£26,250

Erection of Eighty-six Houses.

Rogers & Son, Cardiff	£22,500

Construction of New Roads and Sewers on the Brewery Fields Estate, and Widening Bunn's-lane and St. John's-road.

Lewis & Taplin, Birmingham	£6,667

Construction of New Sewers in St. John's-road and Bunn's-lane.

Lewis & Taplin, Birmingham	£460

ISLEWORTH.—For alterations and repairs at the Union Offices, and (2) at Warkworth House, for the Guardians of Brentford Union :—

Alterations to Old Warkworth House.

Leighfield, Jersey-road, Osterley	£70 15 6

[Consideration of tender for alteration to Clerk's Office adjourned.]

LANARK.—Accepted by the City Council for the erection of the remaining 150 houses at Mossend to accommodate munition workers :—

Digger, Brick, and Mason Work: J. J. & P. M'Lachlan, Larbert	£13,589	6	3
Carpenter and Joiner Work: J. M'Donald, Glasgow	16,016	11	10
Slater Work: P. White & Co., Glasgow	4,058	6	4
Plumber Work: G. Munro, Glasgow	7,312	12	10
Plaster Work: H. S. Bathgate, Glasgow	1,607	18	7
Painter Work: P. S. Murray, Hamilton	741	6	7½

LANCASTER.—For making alterations at the Confectionery Department at the Central Buildings, New-street, Lancaster, for the Lancaster and District Co-operative Society, Ltd. Mr. R. Jackson, architect and surveyor, 32, Market-street, Lancaster. Quantities by architect :—

Mason: R. Ward, Lancaster*	£25	11	0
Joiners: Peill & Ridley*	124	15	0
Plumbers: Calvert & Heald*	82	9	6
Painters: R. Crook*	24	9	0

MAIDSTONE.—For the reconstruction of t sewers and drains at Nos. 1 to 7, Warwick-ro and Nos. 11 to 18, Stacey's-passage, for the Tow Council :—

Cruttenden & Son	£56	0
R. C. Barney & Son	54	15
G. Pearce & Son	54	5
Martin & Newman*	52	8

NEWPORT (Mon).—For the construction of new road, from Corporation-road to Spitty-lane, f the Corporation :—

J. H. Monks, Newport*	£919

ROMSEY.—For the pulling down of the o house standing on the Woolpack premises, and f the erection of three cottages on the site, for t Town Council :—

G. J. Drewitt*	£65

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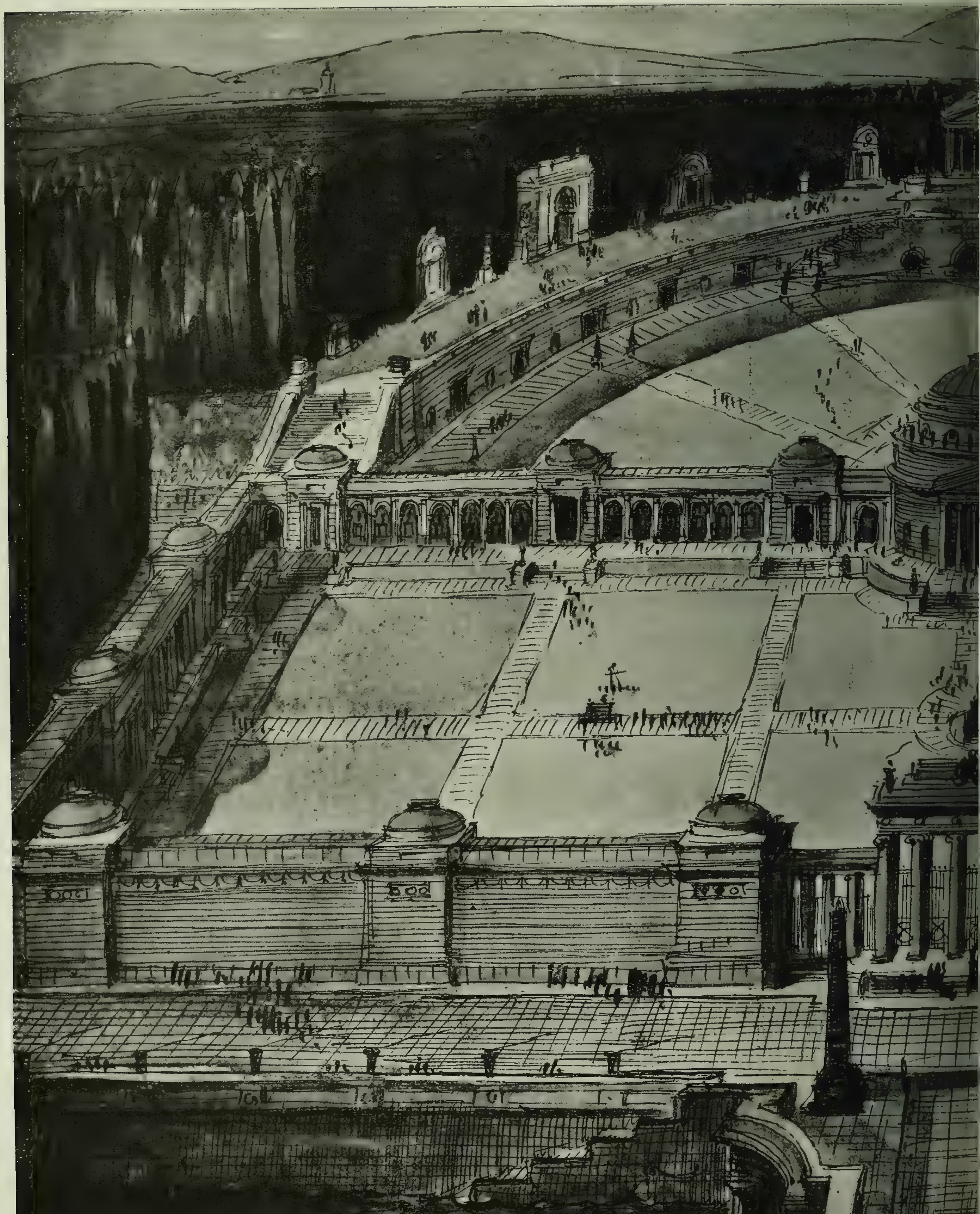

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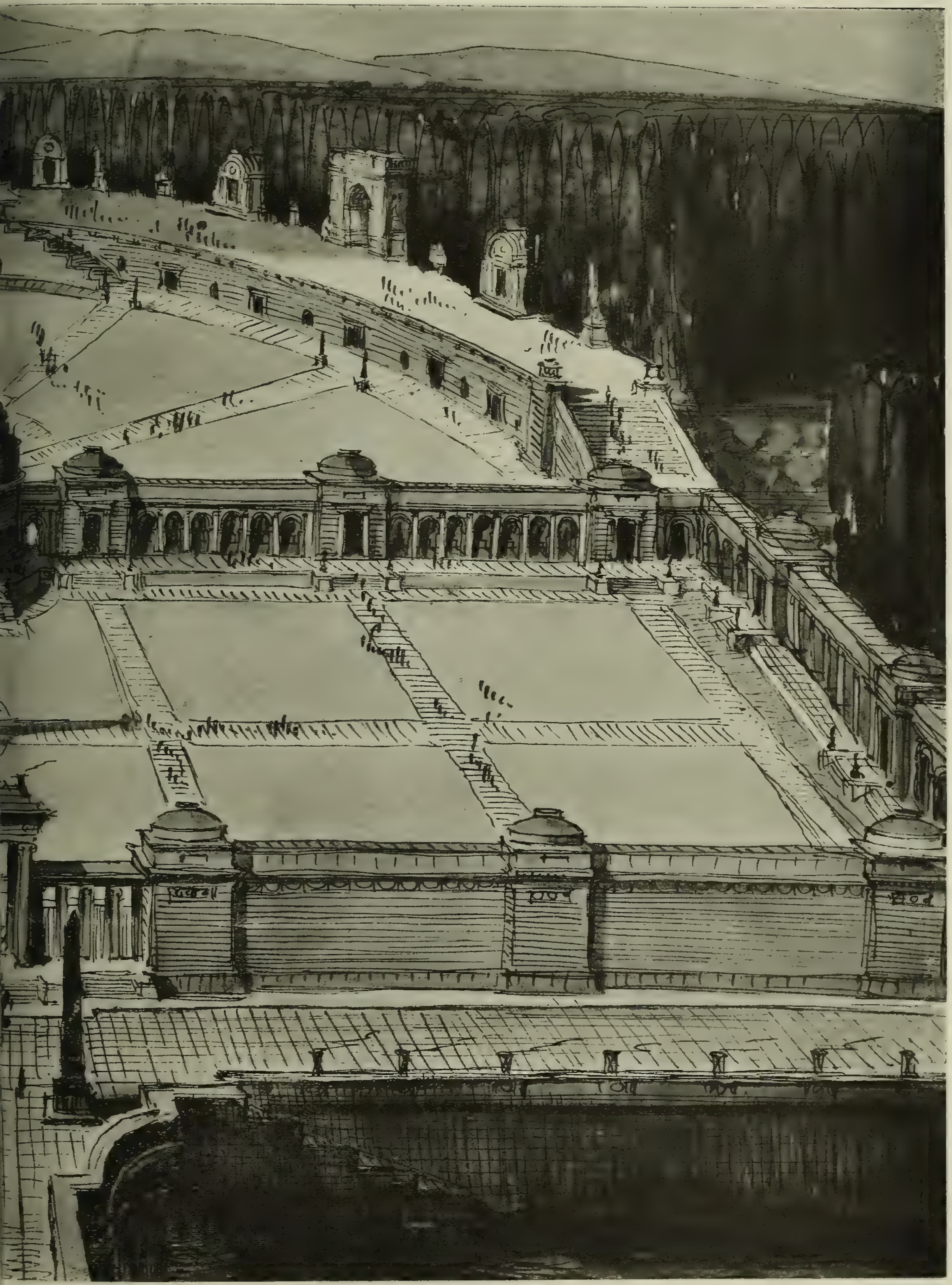

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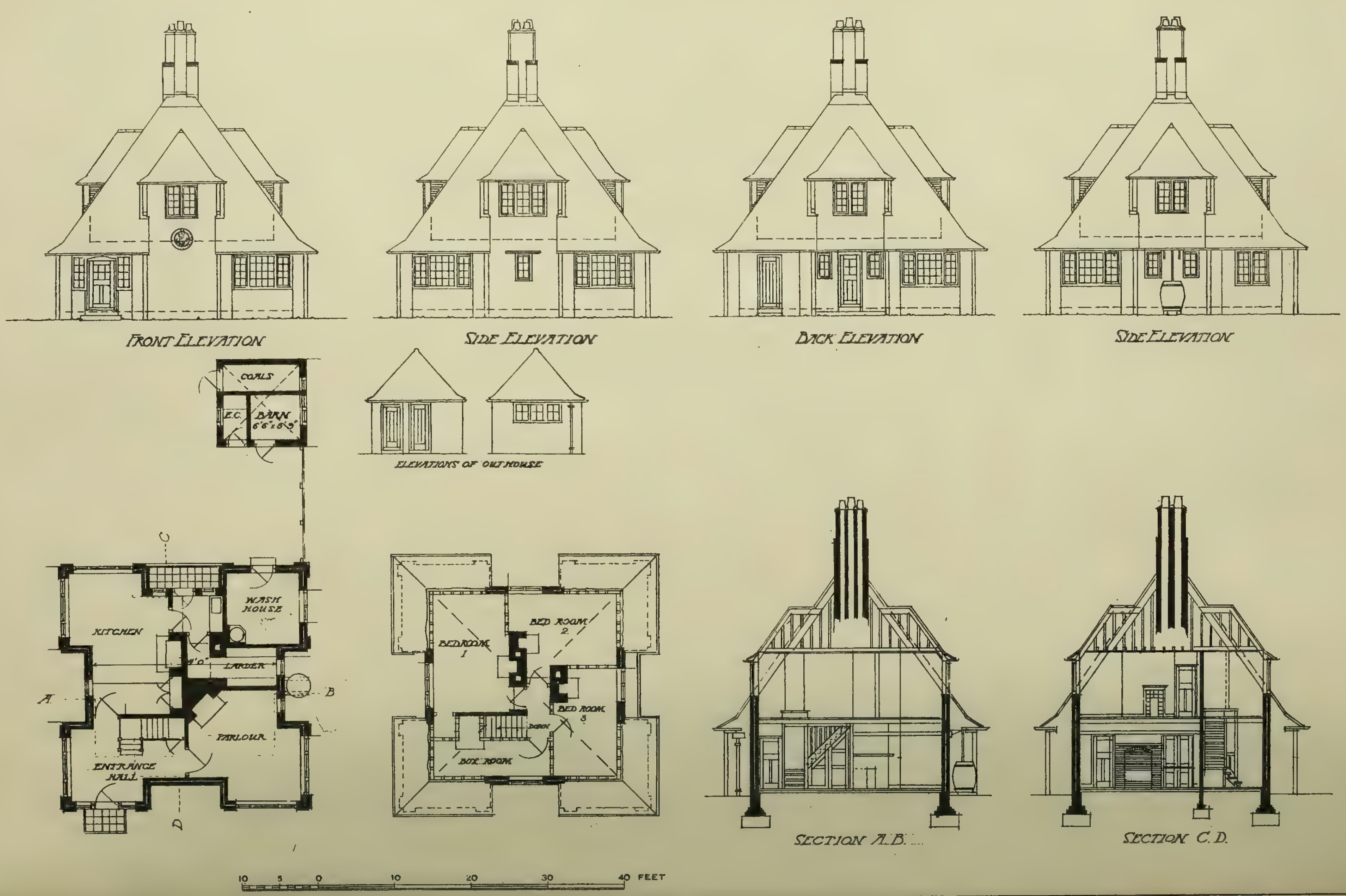
FOR HIS GRACE THE DUKE OF BEDFORD



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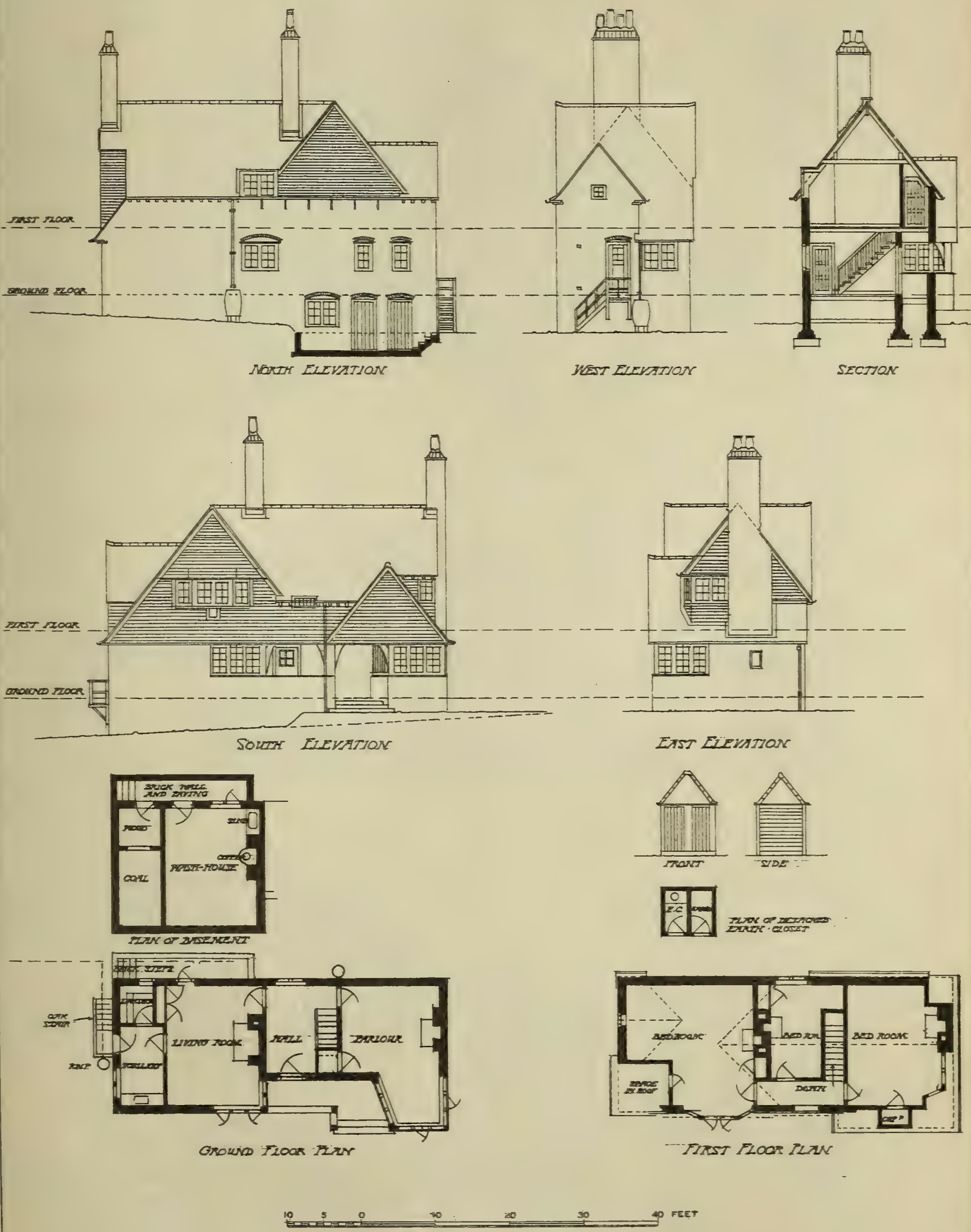
NEW LODGE IN THE BIRCHMORE DRIVE

FOR HIS GRACE THE DUKE OF BEDFORD



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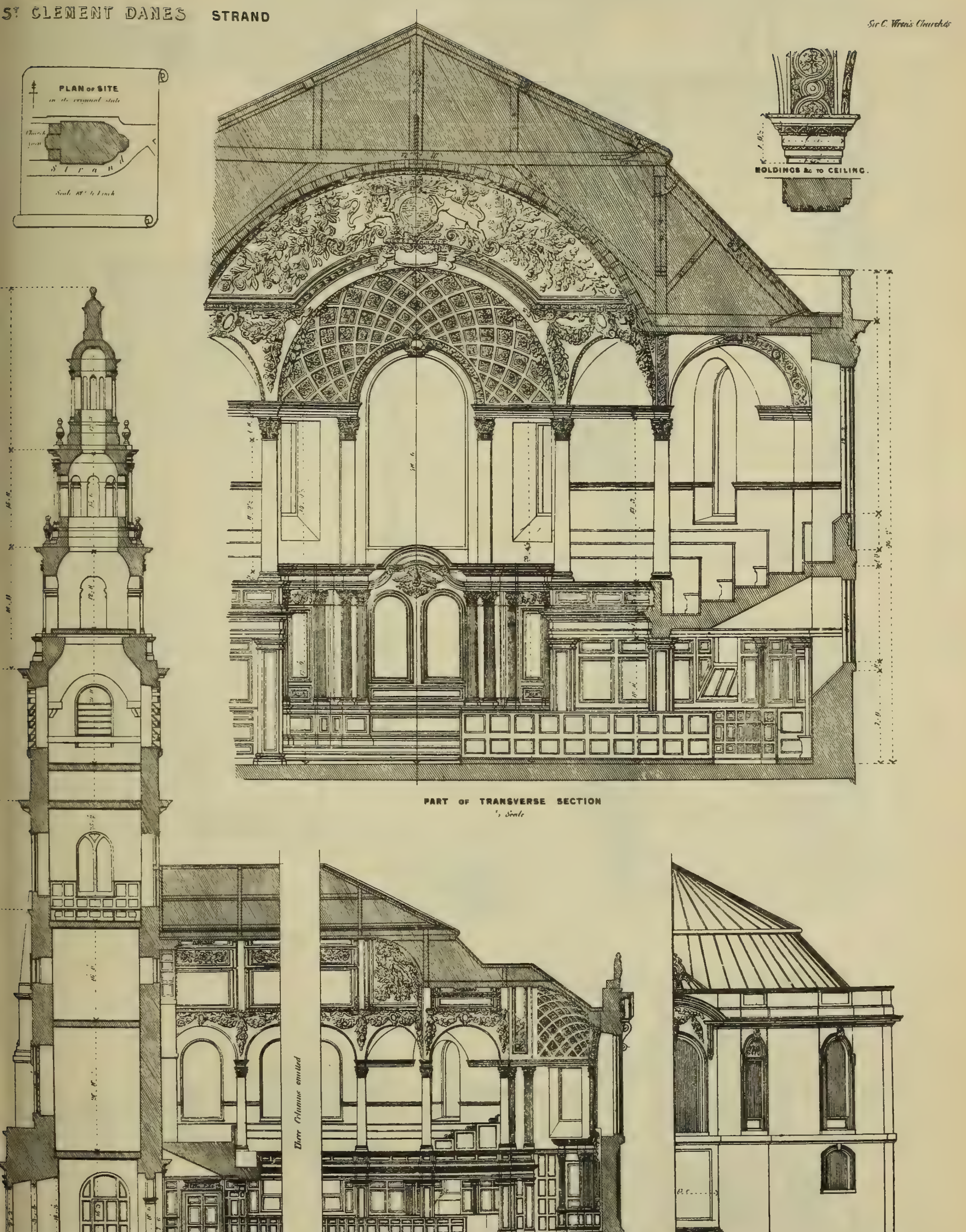

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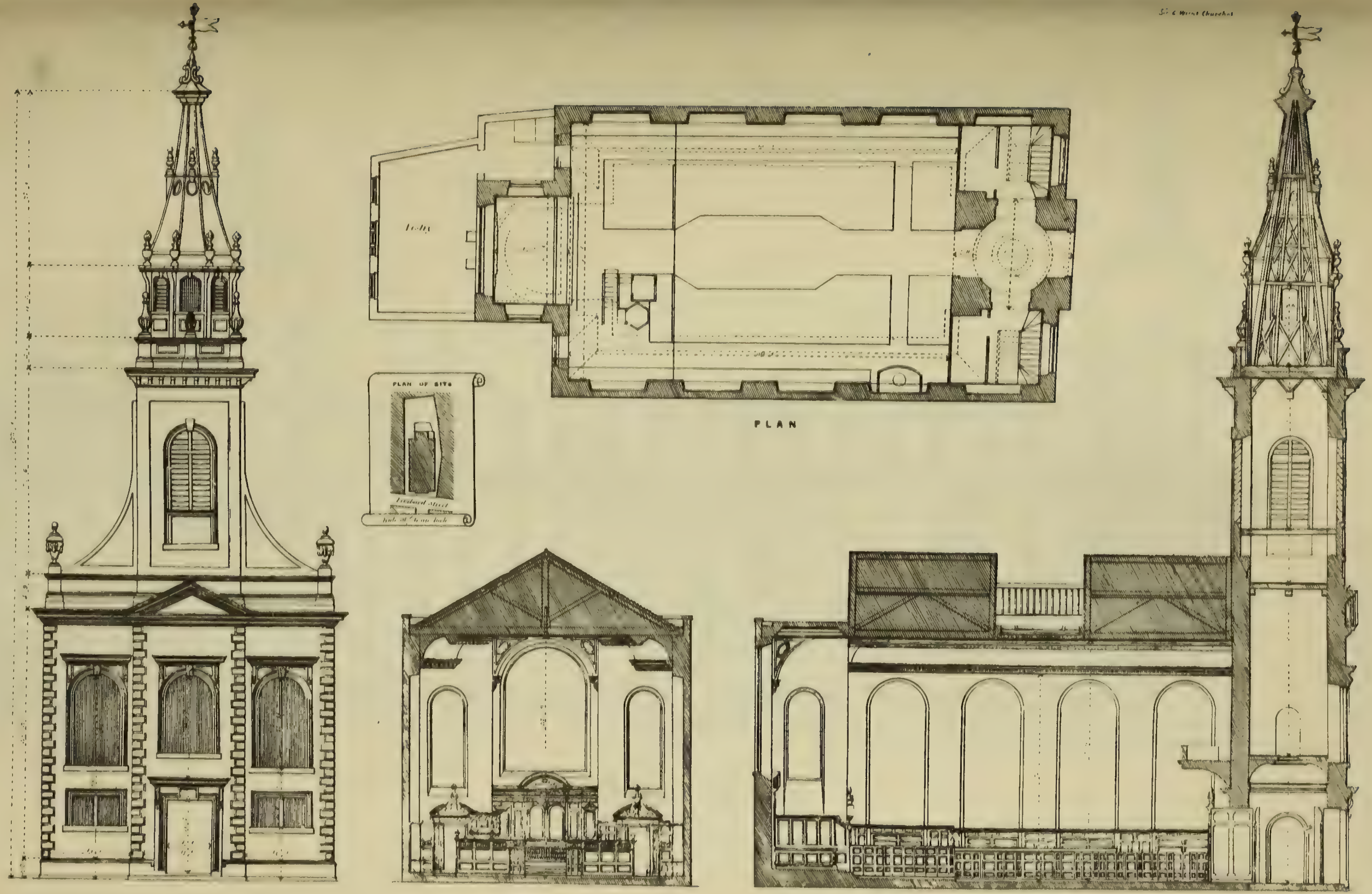

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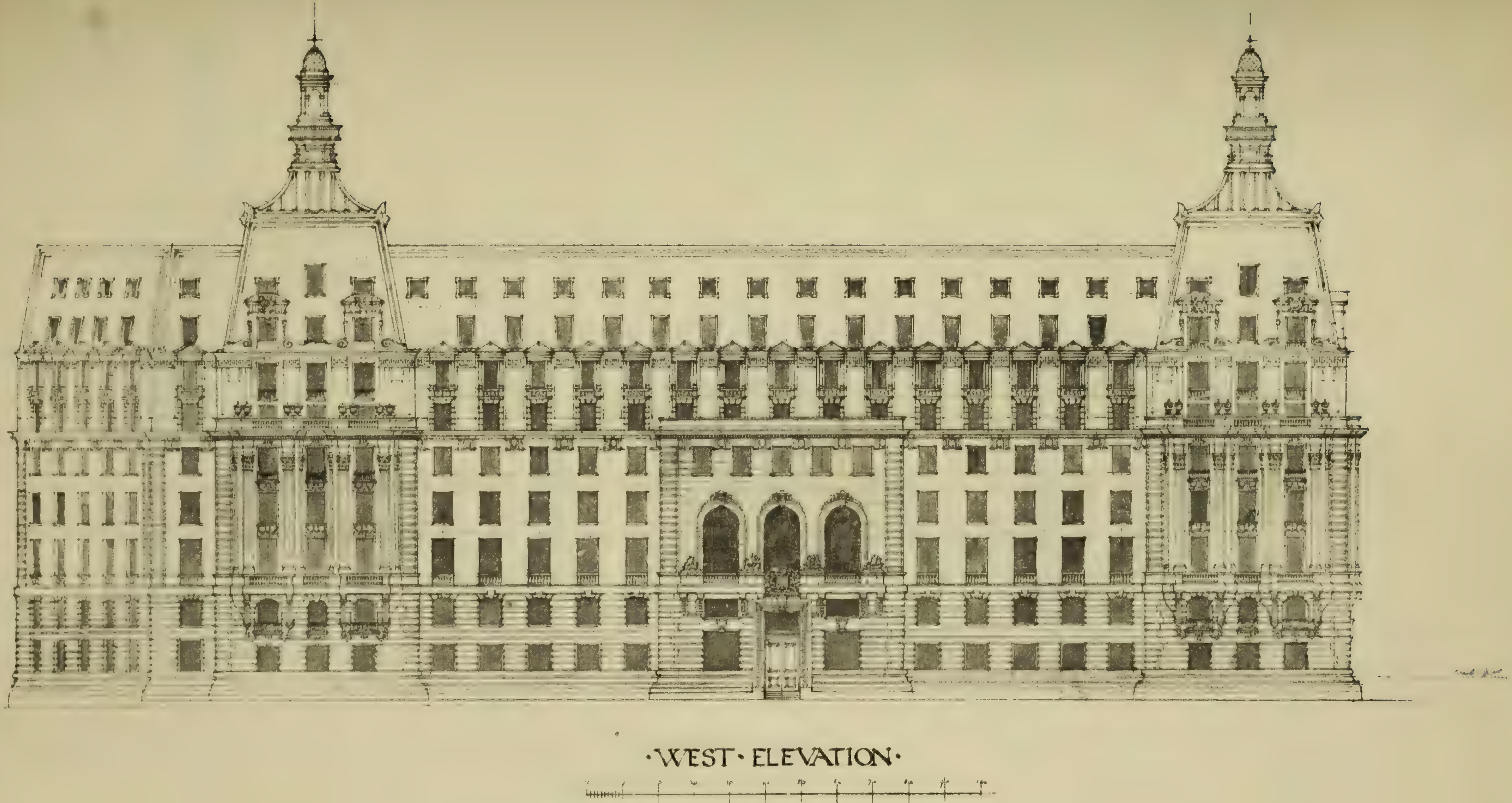
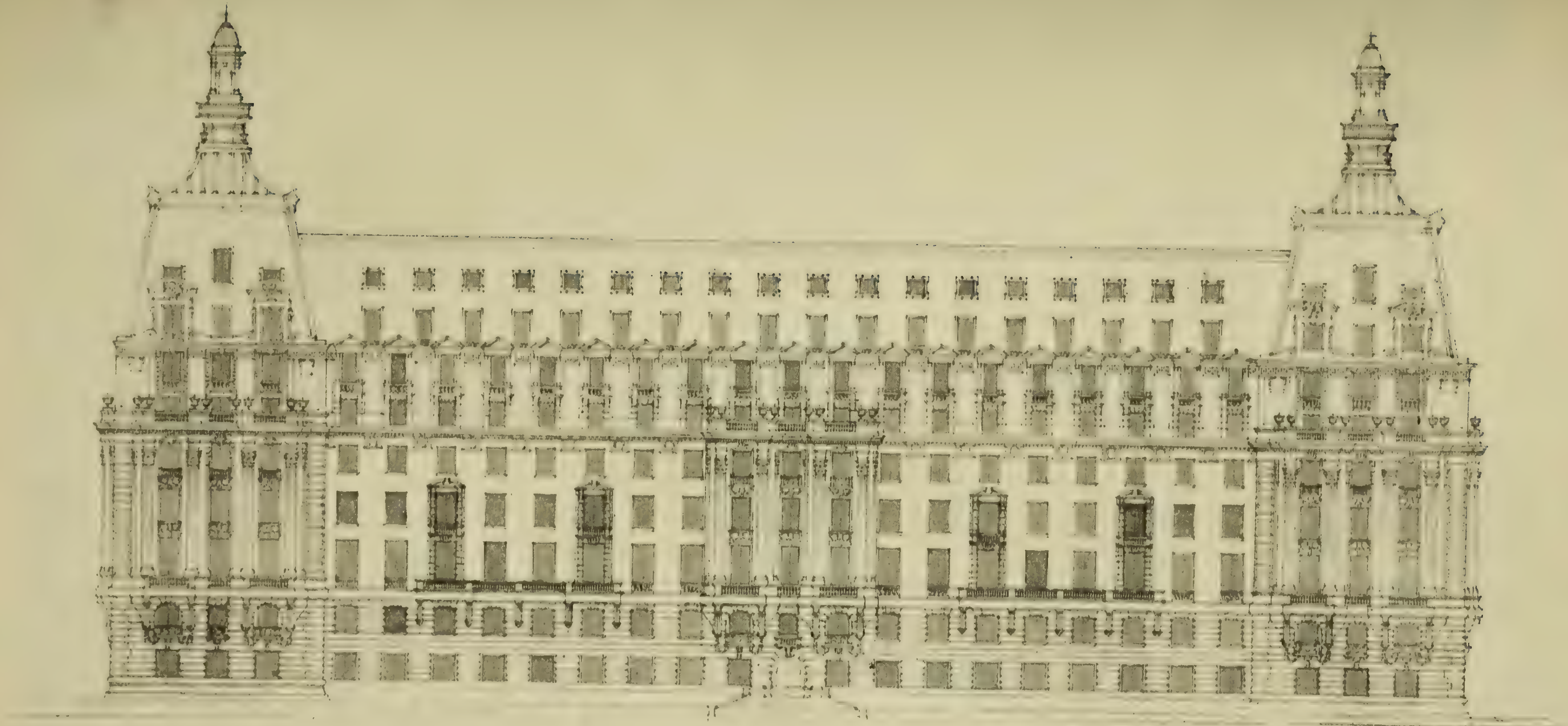


NEW PUBLIC OFFICES FOR THE BOARD OF TRADE.—DESIGN BY MR. W. A. PITE, F.R.I.B.A.



·EAST·ELEVATION·

NEW PUBLIC OFFICES FOR THE BOARD OF TRADE.—DESIGN BY MR. W. A. PITE, F.R.I.B.A.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3810. FEBRUARY 11, 1916.

NECESSITY AND COMMERCIAL PROSPERITY.

IT was said by Herodotus more than two thousand years ago that the most industrious and wealthy nations were not those living in countries where the conditions of life were easiest and in which Nature had been kind and bountiful, but those countries here Nature or war had imposed on the people difficult nditions, which served as a powerful incentive; and what as true two thousand years ago remains equally true to-day, d one of the handicaps which will remain after the war will that of high taxation. We can obtain nothing from nothing; d if we lived on some barren and unproductive plain, remote om the highways of commerce, high taxation would mean end to possible progress and would lead to stagnation. apoleon told O'Meara at St. Helena that the colossal debt cumulated during the Napoleonic Wars would lead to mmercial bankruptcy here, for the great war with France d cost this country the equivalent of £2,000,000. The evelopment of our manufacturing industries, the invention d use of steam, modern agriculture, commerce, and banking ere more the outcome of necessity than chance, and ritain entered into an era of enormous commercial rosperity which but for war might have come far more owly, if indeed it had come at all.

In a similar way the natural poverty of Germany stimulated s rulers and people to build up commerce and wealth by the nprovement of methods and organisation of industries which wards the end of the last century were rapidly displacing those f this country, in many ways in a more favoured position of dvantage. In the case of America the stimulus was of a ifferent character—the necessity of settling a large area of irgin land, of dealing with a volume of foreign immigration hich the world had never seen before, and, lastly, of meeting e handicap which arose through the high rate of wages in new country. That important factor, which is one which it evident we shall have to deal with here, has been met in merica by a far greater readiness and quickness in adapting nd using the increased powers given by machinery.

Two years ago the Board of Trade published its first Census f Production, relating to the year 1907, which shows that in e boot and shoe trade every thousand wage-earners ere employed 178 horse-powers as against 486 in the United tates; in the butter and cheese industries, 1,447 horse-powers s compared with 5,507 horse-powers; and in cement-making, 195 horse-powers as against 13,873. Thus each worker who employed in many industries in the United States produces om three to four times as much as his competitor in this untry. These figures prove that with wages of twice the mount paid in this country commodities could be produced ore cheaply in the United States than in this country, though rough the operation of tariffs the manufacturer may in many ases be able to sustain prices, so increasing his profit. In he boot and shoe trade the large importation of American oots and shoes was checked by the introduction of improved achinery and methods of manufacture, but authorities are robably right in saying that British industrial output can be oubled or trebled by the introduction of labour-saving achinery; but hitherto capitalists and workers have been ontent with a comparatively low standard of production, hile the workers in addition have, in many cases, opposed he introduction of better machinery from the same unreasoning islike which frequently led to the attempts to obstruct the ork of the first railway builders.

Clearly, therefore, there is no reason to assume that we ave not in our hands a means by which we may make ood the wastage of war and once again enter into a period of great commercial prosperity and expansion which but for the stimulus of necessity would have remained untouched and untried.

In a large number of cases we have the new means already provided in the shape of factories and power plant newly built for purposes connected with the war, and by the enlargement and refitting of existing factories for war purposes. It is also to be hoped that labour will recognise that it has nothing to gain by the limitation of output. Fiscal changes, though they may take the form of the creation of tariffs in this country, will be accompanied with the lowering of others we have had to contend against before the war, so that the net result may well be to give this country a nearer approach to free trade than was possible so long as the freedom of English markets was assured to all nations, whatever tariff walls they erected against the introduction of our goods. If America, enjoying the effects of peace while Europe has to expend its millions on war, should prove too dangerous a rival in European markets, it is quite possible that the Allied countries may safeguard their common interests by placing her manufactured products on less favoured terms than those of the countries which have been banded together against a common enemy.

Mr. John E. Gardin, Vice-President of the National City Bank of New York, says that, while it is true that the English banknote cannot now be redeemed, all know that its redemption is absolutely assured and that New York had lost its chance of taking England's place in supremacy as a financial centre because it was too busy trying to pay its own debts to assume any of the burdens of the other countries; but that England is now paying the penalty of its commercial greatness, because the whole world is using whatever credits it has to dispose of in London to create Dollar Exchange in the only country in which commodities can be readily purchased; however, the present state of things will be altered with the advent of peace, and if American competition in European markets is too strenuous after the war the Allied nations, acting together, will have it in their power to redress the balance by united action such as would have been impossible but for the war.

It may thus be that American capital, seeking to secure its share of European commerce, may possibly be driven to invest it in the shape of works and the employment of labour in Europe—in financing European industry rather than in competing with it.

Mr. Gardin says: "The reconstruction of normal conditions will be slow. The flower of European manhood has been swept out of existence. What is left, being more or less incapacitated, will not be able to do its share in the world's work, hence a great deal will be expected of our people who have been spared the hardships of war." Mr. Gardin appears to neglect somewhat the lessons of past history, which go to prove that, in spite of the wastage and loss of war, its effect has often been marked by the subsequent commercial quickening of production and enterprise. The Civil War in America was the starting-point of the industrial development of some of the richest mineral districts in America, which might have remained for long untouched had the old *régime* lasted; the milliards of francs paid by France to Germany after the last war, the loss of life, and the cession of rich provinces left a nation more determined to develop its resources than ever before, and so added to the wealth of France; and it may be that the countries which are outside the present war area will be precisely those which will not feel the advantage of the great activities which make national wealth—activities which are born amidst the storm and stress of stern necessity.

NOTES.

The R.I.B.A. Gold Medal.

We are glad that the R.I.B.A. Gold Medal is to be awarded to Dr. Rowand Anderson, who has long been prominent among the ranks of distinguished architects for the merit of his executed work, his services to the cause of architectural education, and his high character and lofty ideals. Dr. Rowand Anderson has been one of those whose work and life have done honour to a great art, while his example has set a standard which all must be grateful for.

Drawings by William Burges.

A collection of the designs and working drawings of the late William Burges has lately come into the possession of the Royal Institute of British Architects, and a selection from them, now on view in the Common Room, consists of the working drawings of his own house in Melbury-road. When the final estimate of the work of the protagonist of the movement known as the Gothic Revival comes to be made it is possible that, after Pugin, Burges will take an outstanding place as the one man who saw beneath the surface of things—whose work had value as architecture apart from the style in which it was presented. Be this as it may, there is no doubt these drawings have a freshness of interest not usually found in work of this period, which seems to suggest that the endeavour of the artist was not chiefly confined to the archæological reproduction of the details of the style in which he happened to work. Perhaps this freshness of interest is due to the fact that Burges appears to have drawn so much of his inspiration direct from Nature, and also to have aimed at a directness and simplicity of arrangement and expression which alone lifts his work above the level of most of his contemporaries and followers. Although these designs are in a style no longer fashionable, they can hardly be called old-fashioned, and every artist will find pleasure in studying them. The Institute is to be congratulated on their acquisition.

The Museums.

The decision of the authorities as to closing the British and other museums has aroused a volume of protest in the daily Press which appears to be largely justified. Economy may be of two kinds—the direct economy of the Government in restricting its spending capacity, and the indirect measures such as taxing amusements in order both to obtain revenue and to enforce individual economy by making amusements more expensive. It may be assumed that few can do without some form of recreation or amusement, and if the sources where such recreation and pleasure can be obtained inexpensively are cut off there will remain a greater inducement to indulge in what is more costly. It also seems to us that if a proper appeal were made by those in authority many would be willing to give up time and act in the capacity of attendants and caretakers in museums and galleries, thus enabling the Government to promote economy without closing them. Presumably the routine duties of a museum attendant or caretaker are no more difficult or onerous than those which fall to the lot of a special constable, and the method of dealing with the two problems is almost identically similar.

War Memorials: A Suggestion.

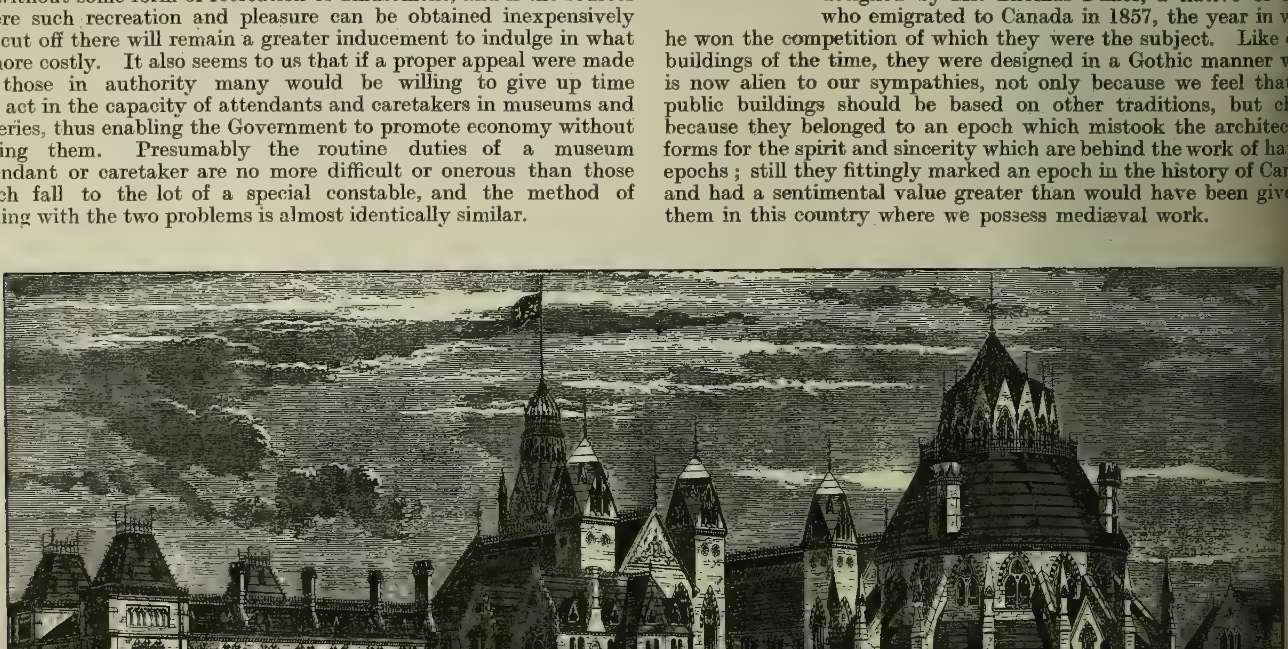
Canon H. D. Rawnsley, in a letter to the *Times* pleads for two kinds of possible war memorial in the form of (1) the endowing of our secondary schools with scholarships, which will enable th best scholars to pass on to the Universities, which would be otherwise impossible for financial reasons; and (2) th acquisition of some beautiful view point, open space, or space o historic influence to be dedicated to the public in memory of the brav men of the locality who have fallen in the present struggle. Canon Rawnsley states that an offer has reached him, and will be laid befor the National Trust at their next meeting, of twenty-six acres o moorland near one of the great Lancashire towns to be preserve in memory of a lover of Nature who has fallen in war. We think both suggestions are admirable, and have little doubt that they wil fall on fruitful ground, since no community is so small or poor tha it might not afford so simple and appropriate a memorial to its dead

The Damage from Air Raids.

The recent air raids will again draw attention to th question as to whether the victims should no receive compensation from the public funds, an whether the system of insurance inaugurated by th Government is equitable. In this connection th observations of Lord Justice Phillimore in delivering judgment o Saturday in a case in which a Welsh coal company were seeking t recover from the County Council police expenses incurred during th strike riots in 1910 seem particularly apposite. His lordship i reported as saying: "The subject pays rates and taxes to ensur himself protection against domestic as well as foreign foes, and it i the duty of the Government to provide him with it. The result o this matter is that, unless Parliament takes steps to recoup thos who have had to bear burdens which should never have been imposed upon them, the colliery companies as to part, and apparently th ratepayers of the Metropolis as to the rest, have to defray expenses which should properly be borne by the Exchequer." These words seem peculiarly applicable to the damage incurred in air raids. Th system of insurance is an addition to the taxes already paid to obtain security, and, as such, is unjustifiable; it is also inequitable in its application, as it is a tax on those who may sustain no damage; and, lastly, the scheme has been imperfectly formulated, since there i considerable doubt whether, should any dispute arise under a policy, the aggrieved subject can bring an action against the Government.

The Parliament Houses at Ottawa.

We regret to record the loss, by fire, of the Parliament Houses at Ottawa, since they appealed to th affection and imagination of Canadians. They were designed by Mr. Thomas Fuller, a native of Bath, who emigrated to Canada in 1857, the year in which he won the competition of which they were the subject. Like othe buildings of the time, they were designed in a Gothic manner which is now alien to our sympathies, not only because we feel that ou public buildings should be based on other traditions, but chiefly because they belonged to an epoch which mistook the architectura forms for the spirit and sincerity which are behind the work of happie epochs; still they fittingly marked an epoch in the history of Canada. and had a sentimental value greater than would have been given t them in this country where we possess mediæval work.



Parliament Buildings, Ottawa, Canada West.

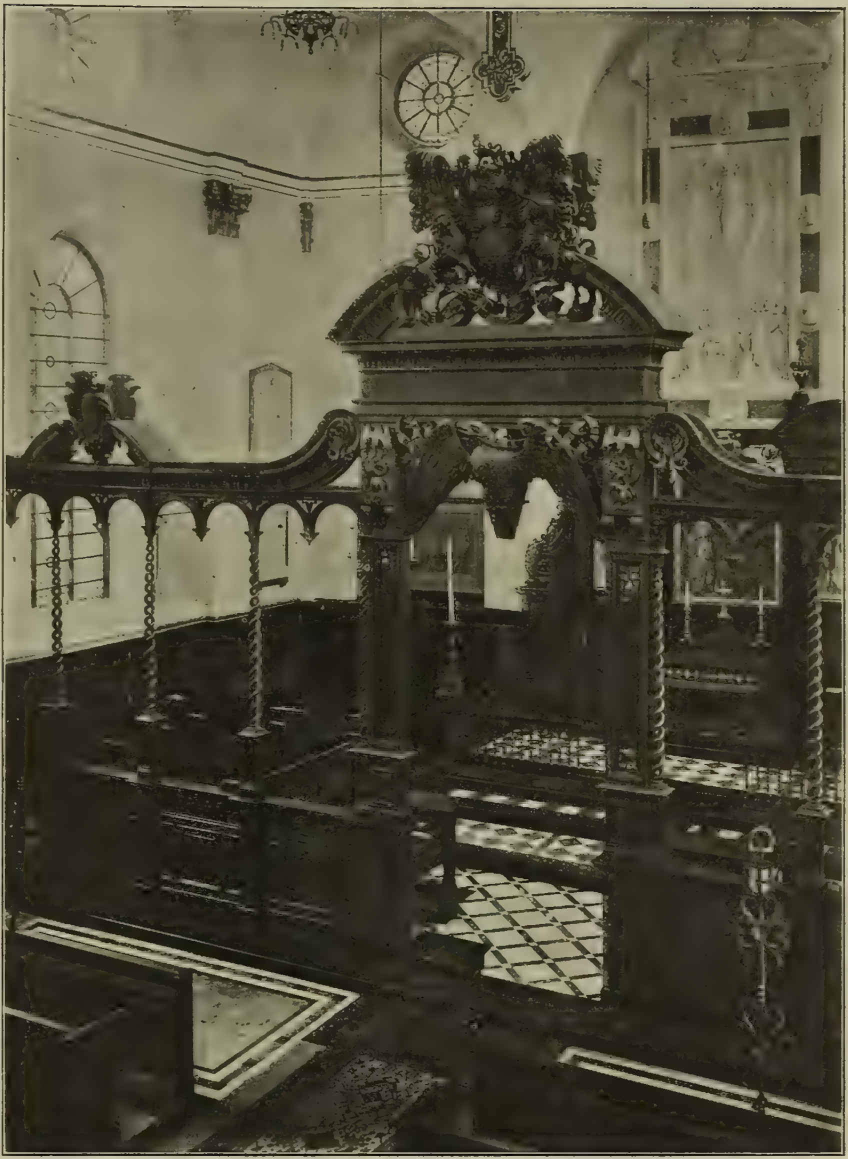
Messrs. Fuller & Jones, Architects.

IE LONDON CHURCHES)F WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. X.—St. Margaret, Lothbury.

r. MARGARET, Lothbury, is situated imme-ely opposite to the Bank of England in ıbury. With the church, which is in the of the Crown, are united the parishes of other churches, which either were not ilt after the Fire or have been demolished equently, namely, St. Christopher-le-ks, the first church of Wren's to be olished, which was removed to provide e for the extension of the Bank of England 781; the Church of St. Bartholomew, by the hange, pulled down in 1841, which faced the hange on the site now occupied by the Sun Office; St. Olave, Jewry, situated on the side of Old Jewry, and demolished in 1888; Mildred, in the Poultry, pulled down in ; and St. Martin Pomeroy and St. Mary church, which were not rebuilt.

. Margaret, Lothbury, thus serves seven shes, and, though its architectural scheme ceedingly simple, it forms one of the most tiful of all Wren's interiors, the woodwork ornament of the church being unusually and well preserved, while the single aisle the street forms a Morning Chapel, a en between the range of columns dividing el and nave without disturbing the unity of ral effect. The magnificent chancel screen the sounding-board of the pulpit were of the woodwork of All Hallows, Thames-t, and were re-erected in St. Margaret's the destruction of All Hallows. The n gallery in the west end of the church fine and simple example of design, and the ble font in the Morning Chapel, an unusually l and delicate specimen of marble work h is attributed to Grinling Gibbons. The ch is well lighted, so that its detail can seen to exceptional advantage, and the ern decorative accessories which have been added, notably a suspended cross over the chancel screen, designed by a son of the present rector, the Rev. A. J. Ingram, M.A., are in keeping and harmony with the general scheme.



The Chancel Screen, St. Margaret, Lothbury.

The Pulpit, St. Margaret, Lothbury.

Externally the treatment is simple and pleasing, the range of windows and the projecting columned porch are good, while the steeple, though not of exceptional interest, is well proportioned and architectural in its character. The present church was completed in 1690.

No. XI.—St. Augustine, Watling-Street.

At the angle of Watling-street and Old Change stands the Church of St. Augustine, with which after the Great Fire was united the parish of St. Faith, which was built under old St. Paul's. Originally the Church of St. Faith had been built above ground, but it was pulled down in 1256, when the Cathedral was extended eastward, and replaced by a church under the body of the Cathedral. During the Great Fire the booksellers of Paternoster-row and St. Paul's-churchyard removed their stock to St. Faith's, hoping it would be preserved by this means, and it is stated that books thus burnt were worth £150,000.

The Church of St. Augustine forms a nave covered by an elliptical ceiling with aisles. The effect of the design is probably much spoiled by the removal of the high-backed pews, which tends to exaggerate the unpleasant proportion of the very high bases of the nave colonnade. Architectural character is also diminished by the glazing introduced in bays of the elliptical ceiling, the general impression given by the interior being wanting in architectural mass and solidity.

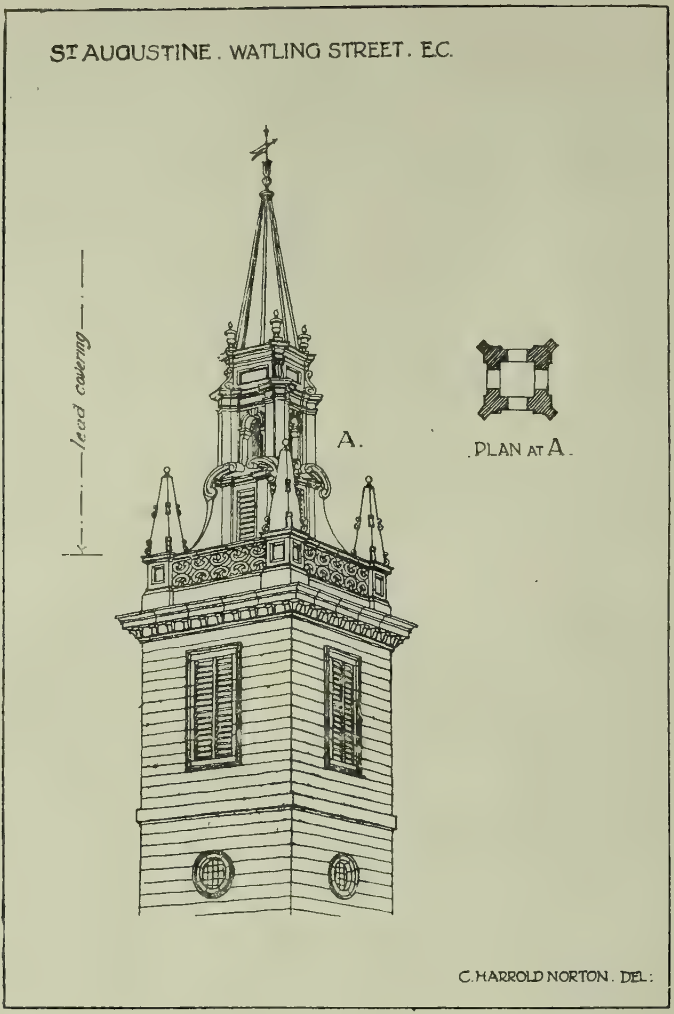
The woodwork has been much cut about and damaged. Originally there were galleries on the north and west sides, but the west gallery, which contained the organ, has been removed.

Externally the design of the tower and steeple is pleasing, its delicacy of outline and proportion forming a good contrast to the mass of the adjacent Cathedral.

No. XII.—St. Anne and St. Agnes, Aldersgate.

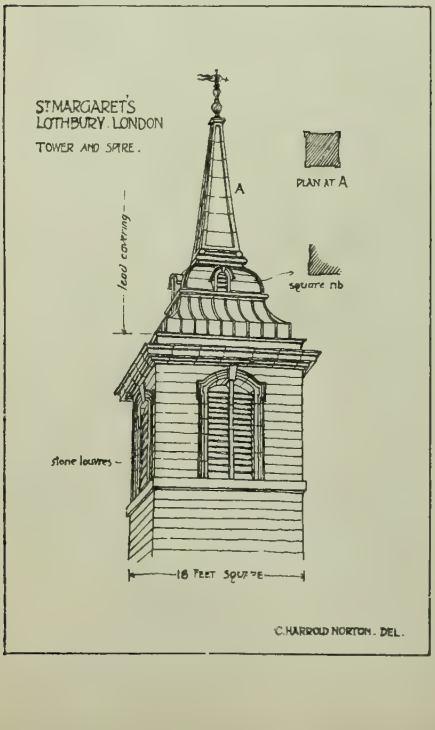
St. Anne and St. Agnes stands on a site towards the west end of Gresham-street, on a free site, which is surrounded by buildings except on part of the side facing Gresham-street. The parish church of St. John Zachary, which was not rebuilt after the Fire, was united with that of St. Anne and St. Agnes.

It is recorded that in 1670, the Commissioners having decided that St. Anne and St. Agnes should form the eleventh church in order of rebuilding, proceedings for putting the decision to effect were inaugurated by a dinner at the Fountain Tavern, to which Sir Christopher Wren and the Commissioners, with the alderman of the ward, Sir Thomas Bludworth, were invited, but it was not till 1677 that the contract was signed, the contractor being John Fitch, carpenter and bricklayer, a member of the Grocers' Company. The amount of his contract was originally £691 16s., but was subsequently increased. Other master craftsmen were John Sherwood, plasterer; Thomas Dobbines, plumber; Stephen Leader, smith; John Haywood, carpenter; William Hammond, joiner. A loan of £500 for rebuilding was granted out of the Chamber



of London to be charged on the coal revenue. Further loans were negotiated in 1680 from Thomas Blackhay, by means of a mortgage on some houses belonging to St. Anne's, for £150 at 5 per cent., and from a Mr. William Whitehall on houses belonging to St. John for a like sum. In 1681–82 a sum of £154 7s. 6d. was received from the Chamber for the parish church ground of St. John's.

The "Pulpitt and Alterpiece" cost £146 17s. 6d., the "ffont" £13, while the "Pews and ornaments of the church" were put up in 1679–80 by means of an assessment of "fower years Tax according to the Poores Poll," which produced £172, while the work actually cost £185.



The Goldsmiths' and Wax Chandlers' Companies demurred against their respective assessments for pew-money, amounting to £45 and £15. In the former case the matter was left to the generosity of the Company, who eventually gave a sum of £30 in 1685–6, but in the case of the Wax Chandlers' Company proceedings were taken in Doctors' Commons, which resulted in the payment of £9 in 1683–4. The total cost of the church amounted to £2,488 0s. 10d. These records form an interesting proof that obtaining money for the erection of a church was at no time an easy process, and would further show that economy in design was forced upon Wren by circumstances.

The church externally is quaint and simple; internally it forms a member of the group of churches planned round a square centre feature of four free standing columns and having two plaster vaults intersecting in the centre. The four angle compartments have flat ceilings with very shallow saucer domes in their soffits. The woodwork is simple in character and sparing in ornament compared with most of Wren's churches, but the church is well lighted and pleasing in its details and treatment. The patronage is in the gift of the Bishop of London.

THE GOLD MEDALLIST OF THE R.I.B.A.

At the last meeting of the Royal Institute of British Architects the President announced that the Council had unanimously nominated Sir R. Rowand Anderson, LL.D., Fellow, as a fit recipient of the Royal Gold Medal for the current year, in recognition of the merit of his executed work, his services to architectural education, and his high character and lofty ideals in the art of architecture.

THE CARPENTERS' HALL LECTURES:

MEMORIALS AND MONUMENTS.

THE first of a course of ten art lectu arranged by the Carpenters' Company, given on Wednesday last week by Mr. Lawre Weaver, F.S.A., in the Hall of the Compa London-wall, Mr. W. W. Pullein, Mas presiding.

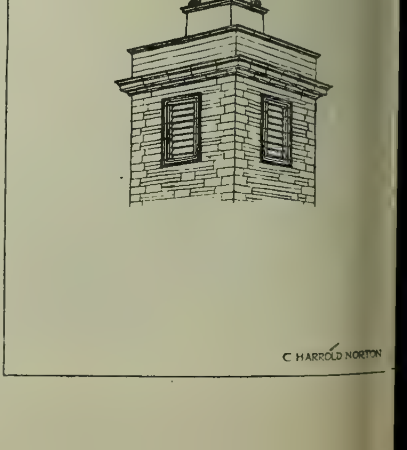
The lecturer, whose subject was "Memor and Monuments," in the course of his rema said:—

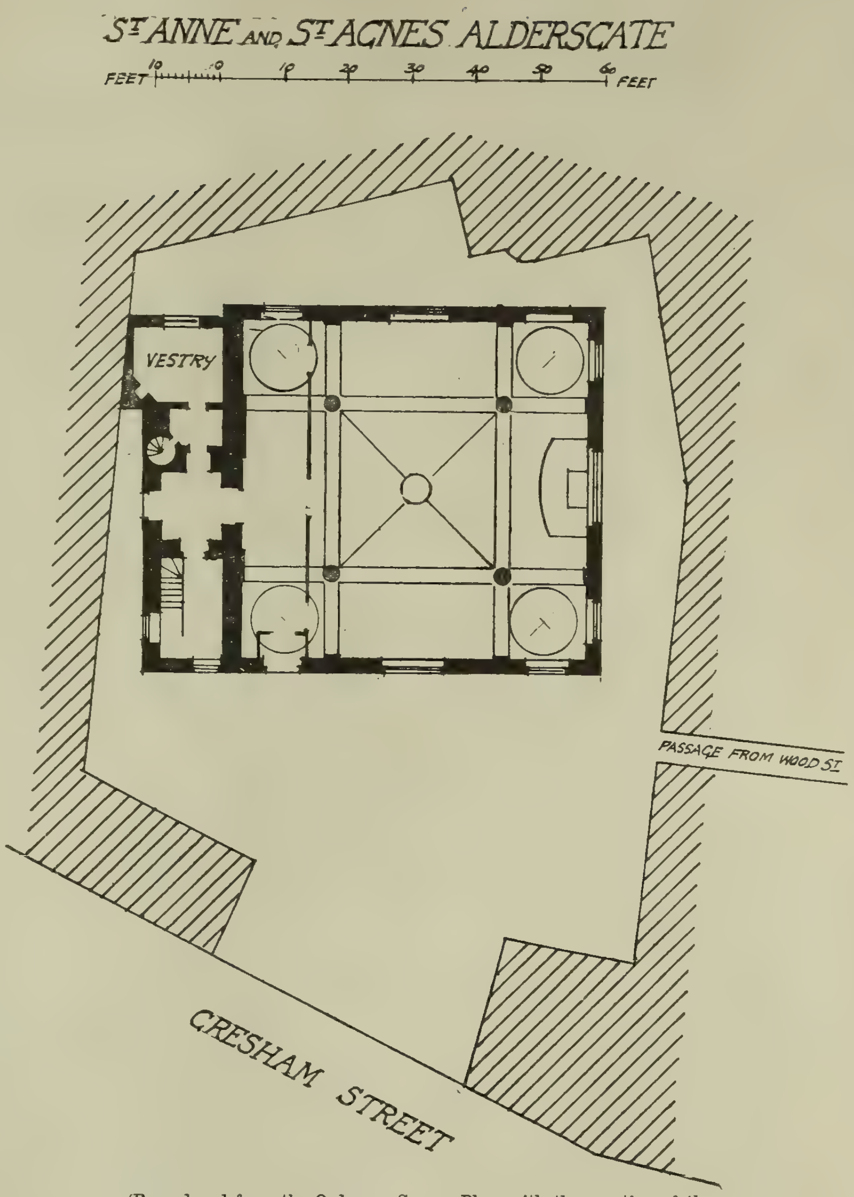
"The spirit of the subject which I am putt before you this evening, that of "Memor and Monuments," is best seen, I think, in th words from the book Ecclesiasticus, wh many schools and colleges sing as an anth on their Commemoration Day, when t remember their pious founders and benefacto "Let us now praise famous men and fathers that begat us. The Lord hath wrou great glory through them by His great po from the beginning. There be of them t have left a name behind them, that their pra might be reported, and some there be which h no memorial, who have perished as tho they had never been."

And then the writer of Ecclesiasticus retu to those who have been honoured in rem brance, and he goes on: "Their name s remain for ever, and their glory shall not blotted out. Their bodies are buried in pe but their name liveth for evermore. people will tell of their wisdom, and the con gation shall shew forth their praise."

The art of memorial design has preci this intent, worthily to show forth the pr of those who have given up their lives for safety and honour. We shall indeed h failed in our honourable duty if posterity say, "Some there be of our gallant sold and sailors which have no memorial." author of the first book on monumen a man oddly enough of my own name—wri as long ago as 1631, gave this simple but enti adequate definition: "A monument is a t erected, made, or written for a memoria some remarkable action yet to be transfe to future posterities."

When the war is over we shall have m pressing duties of national and social an military and economic reconstruction, there will be one duty, or rather privilege, w must not be overlooked—the setting up fitting monuments. Nor is it likely to be o looked, for our hearts will be filled wit passionate gratitude, but we must see t that this gratitude takes shapes worthy the occasion, worthy of the country, worthy of British art. In this connec I would remind you of the meeting held




S^T ANNE AND S^T AGNES ALDERSGATE
FEET 10 0 10 20 30 40 50 60 FEET
VESTRY
PASSAGE FROM WOOD ST
GRESHAM STREET

(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

Wren's Churches. (*See page* 119.)

iday at the Mansion House, under the
sidency of London's chief magistrate, the
rd Mayor, at which the Civic Arts Association
s formally established. It has many pur-
ses. The wide scope of its title indicates
it it is concerned to raise the level of civic
at large, but its more immediate and
ictical purpose is to educate public taste in
matter of war memorials, whether they are
iple tablets to humble individuals or noble
numents to great regiments and to large
oups of men, such as the old boys of a public
100l. Still greater than these will be the
at national monuments to the men of the
perial races. No doubt there will be set up,
bably in London, a noble memorial to the
glishmen who have given their lives for
rrie England. Probably also Scotsmen,
shmen, Welshmen, Canadians, South
ricans, Australians, New Zealanders, and
lians will commemorate in imperishable
rble and bronze the amazing gallantry of
ir brothers. I am, however, going to devote
time rather to the smaller memorials
propriate to individuals.

Professor Adshead is just now delivering at
iversity College a series of lectures on War
morials, and is dealing mainly with the
iception and form of the greater monuments
ich have to be considered in relation to the
ially great opportunities of town planning
a large scale. Such extensive schemes
l be in the hands, we hope, of our ablest
hitects and sculptors, who may be presumed
be in no need of advice from me. Although
h monuments will be of national importance,
l will indeed serve notably to test how far
architects and sculptors have grasped the
sons of the Grand Manner, they will neces-
ily be few in number. On the other hand,
smaller memorials to individuals and to
le groups will number thousands, and there
great danger that without careful considera-
n of the subject of memorial design the
omoters of such monuments will fail to
lise the importance of securing able artists
carry out even the smallest works. It is
this reason that I published my recent
ok, "Memorials and Monuments," and it is
this reason that when asked by the
rpenters' Company to lecture here I chose
s subject, which seems to me the most
portant at the present moment from the
nt of view of British art. We have only
recall to our minds the character of the
morials put up after the South African
ir to realise how little attention the subject
n received, how lamentable in general was
failure to rise to the opportunity, and
v necessary it is that the memorials of the
at war shall be in every way worthy.

A thoughtless and inartistic monument
rely adds a new terror to death. Many
ngs serve a memorial purpose—a reredos,
brary, a parish pump, but the best monument
all is the useless one, because it represents
most obvious sacrifice."

The lecturer then proceeded to show some
ty slides of monuments, ancient and modern,
l to comment on their significance.

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ARCHITECTURAL SOCIETIES.

Edinburgh Architectural Association.

he Edinburgh Architectural Association
on the 3rd inst. in the lecture hall of the
lege of Art, when a lecture was delivered by
W. T. Oldrieve, F.R.I.B.A., on "A Recent
it to New Zealand and the South Sea
nds." Mr. T. F. Maclennan, A.R.I.B.A.,
sident, occupied the chair. The subjects
lt with by the lecturer and the views shown
ted principally to the architecture typical
the places visited. The architecture of the
oris was illustrated by slides from photo-
phs of their dwellings and guest-houses,
a series of wood carvings showing both
ient and modern workmanship. A fine
cimen of the application of an ornamented
canoe to Maori house architecture was
wn in a view of a "pataka," or food-house,
ch was built out of a large war canoe on
shore of Papaitonga Lake. A plan of a
ical Maori "whare," or dwelling-house, with
ails of its construction, was explained, as also a plan of a fortified Maori stronghold, or "pa." The construction of the typical colonial wood-framed bungalow was illustrated at various stages of construction as seen by the lecturer, and some attractive finished specimens were shown. The granites and building stones of New Zealand and the extraordinary variety of New Zealand timber trees were also referred to. The views of houses in Fiji, Tonga, and Samoa embraced both native and modern types, a remarkable difference being apparent between the native type of "palace" in which Tamassese, High Chief of Samoa, was interviewed, and the modern-looking wood-built palace of King George II. of Tonga. The lecture was concluded by showing a selection of views of public buildings in Monte Video.

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BOOKS RECEIVED.

THIRD APPENDIX TO THE SIXTH EDITION OF DANA'S SYSTEM OF MINERALOGY. By Wm. E. Ford. (London: Chapman & Hall, Ltd. 6s. 6d.; New York: Jno. Wiley & Sons.)

THE BRITISH JOURNAL PHOTOGRAPHIC ALMANAC, 1916. (London: Hy. Greenwood & Co., Ltd. 1s. net.)

CONSTRUCTION, EQUIPMENT, AND MANAGEMENT OF A GENERAL HOSPITAL. By Donald J. Mackintosh. (Edinburgh: Wm. Hodge & Co. 15s. net.)

OBITUARY.

Mr. T. M. Houghton.

The death on January 31, at his residence, "Westbrook," Clapham-road, S.W., is announced of Mr. T. Marcus Houghton, M.S.A., F.S.I. He was the architect of the headquarters for Naval Cadets, Wandsworth, and of the block of buildings for shops, offices, and chambers at the corner of Charing Cross-road and High-street, St. Giles-in-the-Fields.

Second-Lieut. W. E. Davies.

Second-Lieut. William Edward Davies, 5th Cheshire Regiment (T.F.), who died of wounds in France on January 29, aged twenty-five years, was the third son of Mr. Percy Davies, of Curzon Park, Chester. He was educated at Arnold House, Chester, and Liverpool University, where he was a student of the R.I.B.A., and won the first-class certificate of the Liverpool School of Architecture and the Lever Scholarship. He then entered the offices of Mr. P. H. Lockwood, of Chester, architect, and continued his studies in London, when, at the outbreak of the war, he joined the Artists' Rifles. He went to the front in September, 1914.

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MEMORIAL TABLET, WESTMINSTER ABBEY.

A tablet by Sir George Frampton has been placed in the south aisle of Westminster Abbey in memory of the late Canon Barnett.

GENERAL NEWS.

A British Trade Fair.

From February 21 to March 3 a British Industries Fair is to be held by the Board of Trade in the ground floor courts of the Victoria and Albert Museum. The fair is a successor to that given in the Royal Agricultural Hall in May, 1915.

The Royal Cambrian Academy of Art.

We understand that Mr. Ivor M. Pritchard, A.R.I.B.A., second son of Councillor O. J. Pritchard (Beaumaris), has been elected an associate of the Royal Cambrian Academy of Art. He is an inspector of the Royal Commission on Welsh Historic Constructions.

Builders' Clerks' Benevolent Institution.

The forty-ninth annual general meeting of donors and subscribers will be held at the offices, Koh-i-Noor House, Kingsway, W.C., on Tuesday, February 29, at 7.30 p.m., Mr. F. Higgs, President, in the chair, to receive the report and balance sheet for the past, and to elect officers for the present year.

Building Trade, Blackpool.

The building trade at Blackpool has been much affected by the war. At present 128 dwelling-houses are in course of construction. The year 1914 constituted a record in the local building trade, 568 plans of houses being approved. During the five years ending 1914 the number of houses erected in the borough was 2,406.

Closing of Museums.

A deputation representing the Museums Association has been received by the Prime Minister. The Association made representations concerning the closing of national museums and art galleries, endeavoured to demonstrate the great and increasing part they have been playing in the life of the nation, and suggested the possibility of rendering them still more valuable as institutions in war-time.

Ancient Church Partially Destroyed.

The parish church at Poulshot, near Devizes, has been partially destroyed by fire. The cause is supposed to have been an overheated stove pipe. The Devizes fire brigade did good service in saving part of the building, but the nave and aisles were destroyed. The church is of historical interest. The fabric dated from the twelfth century, but considerable alterations were carried out in the sixteenth century.

Rebuilding of Louvain.

Much satisfaction has been caused in Belgian circles in Holland (says a Central News telegram from Amsterdam) by the German statement that the Germans do not intend, as was at one time reported, to undertake the rebuilding of Louvain. The *Echo Belge* remarks that it is bad enough that the Germans should have destroyed Louvain, but for them to rebuild it in the German style would be even worse.

Leeds School of Art:
Department of Architecture.

As a result of a recent conference between the Board of Architectural Education of the Royal Institute of British Architects and representatives of the Leeds Education Authority the Department of Architecture of the Leeds School of Art has been placed on the list of architectural schools "recognised" by the Royal Institute of British Architects. It is believed that Leeds is the first school of art to have recognition granted to its Department of Architecture. The recognition has been granted after visits of inspection by deputations of the R.I.B.A. and marks their approval of the work done and the curriculum of study arranged by the Department. As a consequence of recognition students passing satisfactorily through a prescribed course of study become exempt from the R.I.B.A. Intermediate Examination.

New Hindu University, Benares.

On the 4th inst. Lord Hardinge laid the foundation-stone of the new Hindu University buildings which are to be erected at Benares. The estimated cost of the new university will be three crores of rupees—about £2,000,000.

Monuments to Zeppelin Victims.

The *Petit Parisien* announced in a recent issue that in order to commemorate the Zeppelin crimes in Paris that newspaper will offer to the city a monument dedicated to the memory of the innocent victims of the aerial bombardment. The monument would be erected in a square in the populous quarter flown over by Zeppelins, and will bear the names of the victims. It will be, says the journal, an eternal stigma upon the guilty, and will recall to future generations the duty of remembrance and of hatred.—Central News.

British Hospital for Corfu.

With a large part of the Serbian army now established at Corfu, the question of hospital accommodation has become one for serious consideration. The Chairman of the Serbian Relief Fund has received a cable from Corfu informing him that the French and Serbian authorities there would welcome the establishment of a British hospital. Accordingly arrangements have already been made by the Serbian Relief Fund to despatch such a hospital (the seventh hospital organised by the Serbian Relief Fund) to Corfu, and Mr. E. P. Warren, F.S.I., F.R.I.B.A., has been appointed administrator.

Local Characteristics of Work.

At a recent conference at the Holborn Restaurant of the Drapers' Chamber of Trade Professor Lethaby spoke of the things made and sold in this country which no one wanted or ought to want. Yet, he said, we went on fattening the white elephant. Every little town should strive to produce its own little productions and to give them a local characteristic. These should take the place of those "horrid little china coats of arms articles." Every hotel in Europe called a smoked ham a York ham, although the pig probably perished in a sty next door. That showed the value of a local name. Towns must be improved, railway-stations must be improved.

Liverpool Cathedral.

The effect of the war on the progress of Liverpool Cathedral was touched upon by the Bishop of Liverpool at the annual meeting of the General Committee. The Bishop remarked that three courses were open to them. First, to carry out their original purpose and try to raise a sum of £40,000 to complete the cathedral choir and central space by midsummer of next year; second, to stop building altogether until the return of peace; and the third to complete the shell of the choir and central space, roof it in, and, having made it weather-proof, to wait until the war was over. The first course seemed impracticable, the second presented serious difficulties. The committee therefore adopted the third course.

Housing and Land Schemes.

Arrangements are being made by the National Housing and Town Planning Council for a National Congress to be held in the Caxton Hall, Westminster, on four days in the second week of April, to consider problems relating to housing and agriculture, and the possibility of averting unemployment in the building trade after the war. Among the subjects of discussion mentioned in the preliminary programme are:—The preparation of housing schemes to be put into operation at the close of the war. The provision by the Government at the time of the capital required to enable such schemes to be carried into effect. The need of financial aid by the Government to local authorities in the preparation of schemes for the clearance of insanitary areas. The preparation of afforestation, reclamation, and town-planning schemes. It is not suggested by the promoters of the conference that the State should provide capital for building purposes before the close of the war, but it is urged that schemes should be prepared and all the preliminary details completed.

French Tribute to M. Raemaekers.

The Paris correspondent of the *Times* says, under date February 6:—The festivities in honour of M. Raemaekers officially began to-day with his decoration with the Cross of the Legion of Honour by Forain, the well-known French cartoonist, at a very informal gathering of the artistic community in Paris. Among the ceremonies arranged in his honour are a reception at the Hôtel de Ville, a banquet at the Quai d'Orsay, and a public reception at the Trocadéro.

Belgian Architecture and History.

Mr. John Slater, F.R.I.B.A., presided on Monday afternoon at the Royal Society of Arts at the first of the Fothergill Lectures, when the Rev. Herbert West, A.R.I.B.A., gave an address on "Belgian Architecture and History." The Chairman, in introducing the lecturer, said he hoped the Germans would not add to their crime of demolition any attempt to restore according to their own ideas what they had so ruthlessly destroyed. The Rev. H. West proceeded to trace the growth of the cities of Belgium, and pointed out how the country had in the past been the scene of constant battles. Only one other country had suffered in a similar way, viz., Palestine. For centuries Palestine battled with the savagery of the Assyrians, and later it was the scene of the contest between Christianity and its progress and the stationary militarism of Mahommedanism. Now on the soil of Belgium the old question of whether mankind should have free development or should be subject to military despotism was being fought again. The lecturer exhibited a large number of slides of the trade halls, churches, and other historic buildings of Ypres, Tournai, Bruges, Courtrai, Ghent, Liége, Arras, Louvain, Malines, Antwerp, Namur, Brussels, etc., and in the case of Ypres, Louvain, and Dinant showed photographs of the wanton destruction by the Germans.

Trade After the War.

The Report of the Sub-Committee of the Advisory Committee to the Board of Trade on commercial intelligence with respect t measures for securing the position after the war of certain branches of British industry is published as a White Paper. The recommendations of the Committee include the following:—

Larger funds should be available for the promotion of scientific and industrial research and training, and Universities should be encouraged to extend research work devoted to the needs of the main industries in their respective districts.

The law as to the compulsory working o patents should be more rigorously enforced and the fullest possible information as t enemy patents should be given to British firms during the war.

All German and Austrian goods imported should be marked with an indelible mark "Made in Germany" or "Made in Austria Hungary," and goods from other foreign countries should be marked either with the country of origin or with the words, "Foreign Made" or "Not British."

An impartial tribunal should be set up t secure that no preference is accorded to trader in other countries by British shipowners or b home railways, and the canal system should b improved and extended as soon as the nationa finances permit.

Joint-stock banks should be invited t consider the possibility of affording a greate measure of assistance to British industria enterprise, and all Government and loca authorities should be under legal obligatio to purchase, so far as possible, only goods produced within the British Empire.

Trade exhibitions should be held under the control of the Board of Trade, and shoul not be organised with a view to attractin the general public.

Consular officers should be directed to repor cases of infringement of British trade marks o attempts to pass off foreign-made goods a British.

The Government should be urged to conside anew the advisability of establishing a separat Ministry charged solely with the safeguardin and extension of British industry and trade.

ILLUSTRATIONS.

Wren's Churches.

WE illustrate St. Augustine's, Watling-street, St. Margaret's, Lothbury, and the very interesting Church of St. Michael, Queenhithe, now de- lished. Our illustrations are reproduced m "The Churches of Sir Christopher Wren," J. Clayton, published by Messrs. Longmans, een, Brown, & Longmans in 1848, and ich we give by the courtesy of Messrs. ngmans, Green, & Co. Further notes on Augustine and St. Margaret will be found on 119.

Museum at Caerleon, Monmouthshire.

VE think these interesting measured draw- s illustrate the absurdity of the work of the ek Revival as applied to modern buildings, l possibly the paucity of buildings more rthy of close and careful study in the ghbourhood. Wherever the Greek enthusiast ctised he showed in his work his utterly lost se of the quality of appropriateness, whether vas an Elmes, a Smirke, or a lesser archi- t who was designing.

xtensions to the Harris Academy, Dundee.

THIS was a competition held by Dundee ool Board, and confined to architects ctising in Dundee. Ten sets of plans re submitted by six architects, and the essor was Mr. Alexander N. Paterson, R.I.B.A., A.R.S.A., Glasgow. The design ced first was by Mr. A. W. D. Keith, entiate R.I.B.A., Messrs. Maclaren, Sons, Soutar were placed second and third, and Findlay and Mr. Keith were bracketed al for fourth place. Mr. Keith was awarded work to carry out, and Messrs. Maclaren, ns, & Soutar and Mr. Findlay received miums.

The assessor states in his report that the k of the competing architects was one of at difficulty owing to the awkward distri- ion and gradients of the site provided and unsatisfactory character of the present lding. Further, that none of the designs entirely satisfactory, but that in the ign placed first the necessary modifications concerned with issues less vital and more ly dealt with than in any of the others. assessor also states that the design is pact and workable, that good use is made the present building, that the ventilation been carefully considered, and that the hor's estimated cost, £20,050, is accurate pre-war rates. This cost is £2,000 below estimate of the Board. The first design is outcome of a careful study of the original ding. Owing to the levels of the site re is an unused basement about 7 ft. deep w the whole of the present building. The s are shown underpinned, so that a ceiling ht of 8 ft. has been obtained, and this e is occupied with cloak-rooms and dining- n. The floor of the new extensions is lower, and on this level are placed the d and metal classrooms and the cookery- n. The building thus becomes four stories over its whole area, so saving a deal of ground space.

he lower ground-floor plan is well arranged, the lighting will require to be improved laces.

he ground-floor plan shows classrooms primary students. The two classrooms he north-west are very near the boundary at the mercy of the adjoining proprietors ar as lighting is concerned. Staff-rooms placed in mezzanines over, above the lmaster's room, and at this part there are t or nine floors each about 8 ft. ceiling e each other. This compactness is hardly ified in such an important school, but the of plan is very common in the district.

he first-floor plan shows secondary class- ns and laboratories, and on the second are classrooms and art-rooms.

he design placed first is the only one which oughly grasps the principle that playgrounds a part of school design equally with class- ns, and the large straightforward playing es provided are in contrast to the pro- ns in the other plans. The design is very compact both in plan and in section, and a fair compromise has been made between compactness and adequate lighting and ventilation. Generally speaking, this solution of the problem weighs up all the requirements and all the limitations of the site with great care.

The design placed second is good for its place. The authors have sought for spaciousness in planning, and they have perhaps gone farther in this direction than need be. The stairs are well placed and the plan shows a roomy, well-lit building. Advantage has been taken of the difference in site level to introduce a basement floor in the north-east block. This floor includes wood and metal classrooms and dining-room. The ground floor contains primary classrooms, entrances, cloak-rooms, cookery-room, and gymnasium. Four entrances are provided for juniors and seniors of both sexes, but these entrances as shown do not give the maximum of convenience and separation. Valuable playground space would have been saved had another story been added to the north-east block and two stories over the boys' cloak-rooms. Low building on a site so much restricted is inadmissible. The first-floor plan is very straightforward and shows the scheme at its best. There is a difference in level between the floor of the present building and the south-east block, necessitating steps in the corridor. In practice this would not cause any trouble as the steps are well lighted. It is unfortunate that two of the primary classrooms are on this floor. On the second-floor plan two of the art-rooms are awkwardly shaped, but otherwise the plan shows well. There will probably be some difference of opinion as to the utility of the playground and latrines on part of the roof.

The design placed third, while of itself good, is not at all suitable for the site. Most of the classrooms have their windows too near the boundaries, and the playgrounds are very broken up. This scheme would require great economy to bring it in at the Board's estimate.

The assessor is worthy of compliment on the clear and reasonable way in which the conditions of the competition were drawn up and also on the fairness of his award; and the Board are to be congratulated on having got a design which will give them satisfaction in working at a very reasonable cost.

It is understood that the drawings are to be prepared and held in readiness for the commencement of building operations immediately on the termination of the war.

No. 4, New Burlington-Street, W.

THESE premises have been recently rebuilt as a woollen warehouse for the owners and occupiers, Messrs. John G. Hardy, Ltd. The front shown is of Portland stone. Messrs. Dove Brothers were the builders and Messrs Niven & Wigglesworth were the architects.

Design for the Third Church of Christ Scientist.

OUR illustration shows the plans and section of the design we published in our issue for January 28.

"The Storey Institute," Lancaster.

THIS building comprises art and technical school, free library and reading-room, and art gallery.

The portion first erected in 1887–1890 as a completed building was the gift to his native town of Sir Thomas Storey, in celebration of the fiftieth year of the reign of Queen Victoria (the portion on left front in view). On the ground floor are library and reading-rooms, science laboratory, and lecture-room; on the first floor art gallery, music-room, and museum; and school of art studios on the second floor.

The enlargement and additions to the building is the generous gift to the town of Mr. H. L. Storey, D.L., J.P., the eldest son of the late Sir Thomas Storey, and contains on the ground floor large electrical laboratory and metal and other workshops, and manual instruction room; on the first floor cookery and laundry rooms, classrooms, and cloak-rooms; and on the second floor an extension of the art school, with cloak-room and offices, and also enamelling and pottery kiln, etc.

The whole of the work has been carried out from the designs of Messrs. Austin & Paley, architects, of Lancaster, by the following firms:—

1887–1890 PORTION.

Mason—The late Mr. W. Warbrick, Lancaster.
Carpenter and joiner—The late Mr. C. Blades, Lancaster.
Slater and plasterer—The late H. Hartley & Sons, Lancaster.
Plumber and glazier—Messrs. Calvert & Heald, Lancaster.
Painter—Messrs. Eaton & Bulfield, Lancaster.
Heating—Messrs. A. Seward & Co., Lancaster.
Laboratory fittings—Messrs. Pearson & Brown, Manchester.

1906–8 PORTION.

Mason and joiner—Mr. R. Thompson, Lancaster.
Slater and plasterer—Messrs. T. & J. Till, Lancaster.
Plumber and glazier and gas and electrical engineer—Mr. R. P. Wilson, Lancaster.
Painter—Mr. John Taylor, Lancaster.
Fittings—Messrs. J. Hatch & Sons, Lancaster.
Heating—Messrs. Saunders & Taylor, Manchester.

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CORRESPONDENCE.

St. Martin, Ludgate-Hill.

SIR,—In reference to your account of St. Martin, Ludgate, the date for completion (probably a slip) is given as 1634, when Wren was two years old, instead of 1686; and for the sake of reference I should have liked to see a note added to the sheet of plan, sections, etc., to say that the internal arrangements shown are not those existing now, the alteration having been made in 1895.

LEWIS GILBERTSON (Rector).

The Monuments of Liverpool.

SIR,—I read with interest your article on "Monuments of Our Provincial Towns" in your issue of January 28. May I be allowed to make a small correction therein? The monument on the Exchange Flags to Lord Nelson was designed by Matthew Cotes Wyatt and modelled and cast in bronze by Richard Westmacott, and completed on October 21, 1813.

T. E. ECCLES.

Re Painters' Rates of Wages.

SIR,—Referring to a letter over the signature of Mr. J. Bancroft in your issue last week, I beg to point out that the arbitration in question was between the London Master Decorators' Association and Mr. Bancroft's Society, to which the London Master Builders' Association was no party, and, moreover, the question of rates of wages was not included in the award.

The references in Mr. Bancroft's letter to the London Master Builders' Association should therefore be ignored.

In conclusion I am to submit that the rate for painters you give for the London building trade is correct.

S. B. DEPREE,
Secretary, The London Master Builders' Association.

Scaffold Tie Patents.

SIR,—In your issue of January 28, under "Selected Patents," prominence is given to Patent No. 17,474, dated as long ago as the year 1914.

As proprietors of the Scaffixer patents, may we bring to your notice the fact that when a patent for the appliance described as 17,474 of 1914 was applied for we (the Patent Rapid Scaffold Tie Company, Ltd.) successfully opposed the granting of a patent for it, and we were in addition granted costs as against the applicant?

"Patent No. 17,474 of 1914" therefore does not exist, a fact which, after the publication referred to, should, we think, be made known to the trade.

THE PATENT RAPID SCAFFOLD TIE COMPANY, LTD.,
D. PALMER JONES, Managing Director.

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MEETINGS.

MONDAY, FEBRUARY 14.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher on "Famous Elizabethan Mansions." 4.30 p.m.

Royal Society of Arts.—Rev. Dr. Herbert West, D.D., A.R.I.B.A., on "Flemish Architecture." Lecture II. 4.30 p.m.

Incorporated Clerks of Works' Association (at Carpenters' Hall, London-wall).—6.45 p.m.

TUESDAY, FEBRUARY 15.

Nottingham and Derby Architectural Association.—Mr. W. R. Gleave, A.R.I.B.A., on "Quantities and Accounts."

WEDNESDAY, FEBRUARY 16.

Carpenters' Company.—Mr. William Strang on "Some Movements in Modern Art." 7.45 p.m.

Concrete Institute.—Mr. Charles F. Marsh, M.Inst.C.E., on "Reinforced Concrete as Applied to Waterworks Construction." 5.30 p.m.

University of London, University College.—Professor Adshead on "The War Memorial as a Great Shrine, a Pantheon, a Valhalla." 5.30 p.m.

THURSDAY, FEBRUARY 17.

University Extension Lecture (at the British Museum)—Mr. Banister Fletcher on "Triumphal Arches in Rome." 4.30 p.m.

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THE LONDON COUNTY COUNCIL.

THE fortnightly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Cyril Jackson, Chairman, presiding.

Loans.—Loans were granted to Metropolitan Borough Councils as follows:—£13,000 to the St. Pancras Borough Council for electricity purposes; £3,290 to the Woolwich Borough Council for electricity undertaking.

Decoration of Certain Council Schools.—The Education Committee reported that certain of their members had conferred with the undermentioned artists representing the Professional Classes War Relief Council:—Mr. W. R. Colton, A.R.A., Mr. John Hassall, R.I., Mr. M. Spielmann, and Sir Aston Webb, K.C.V.O., C.B., R.A., and after visiting several of the schools with a view to deciding which, in their opinion, would be best suited for their purposes, the representatives of the War Relief Council have recommended the first floor (boys') hall of the Devon's-road School (Bow and Bromley), in which to carry out their first scheme of decoration. They have submitted to the Committee in outline an "Empire" scheme of decoration illustrating life and industry in the British Dominions beyond the seas. On the recommendation of the Education Committee the scheme was approved.

Staff.—The Parks and Small Holdings and Allotments Committee have authorised the temporary employment of carpenters in the work of building and repairing boats at parks and open spaces.

Clapham Common.—The Parks and Small Holdings and Allotments Committee have agreed to a proposal made by the Wandsworth Borough Council for the addition to the public footway of a strip of land forming part of Clapham Common, next the shelter and women's conveniences near Clapham Cross.

Victoria Embankment Gardens.—It has been decided that the Temple and Whitehall sections of the Victoria Embankment Gardens shall not be opened until 9 a.m.

Statistical Abstract for London.—Volume XVI. of the Statistical Abstract for London has been completed and will be placed on sale.

Bow-road and East India Dock-road Tramways.—The Highways Committee reported that they had arranged for the tramway margins in Bow-road and East India Dock-road to be repaired by the Poplar Borough Council at a rate of 8s. 11d. (plus 10 per cent.) a lineal yard for stone paving, and 9s. a lineal yard for wood paving. The expenditure is estimated at £400.

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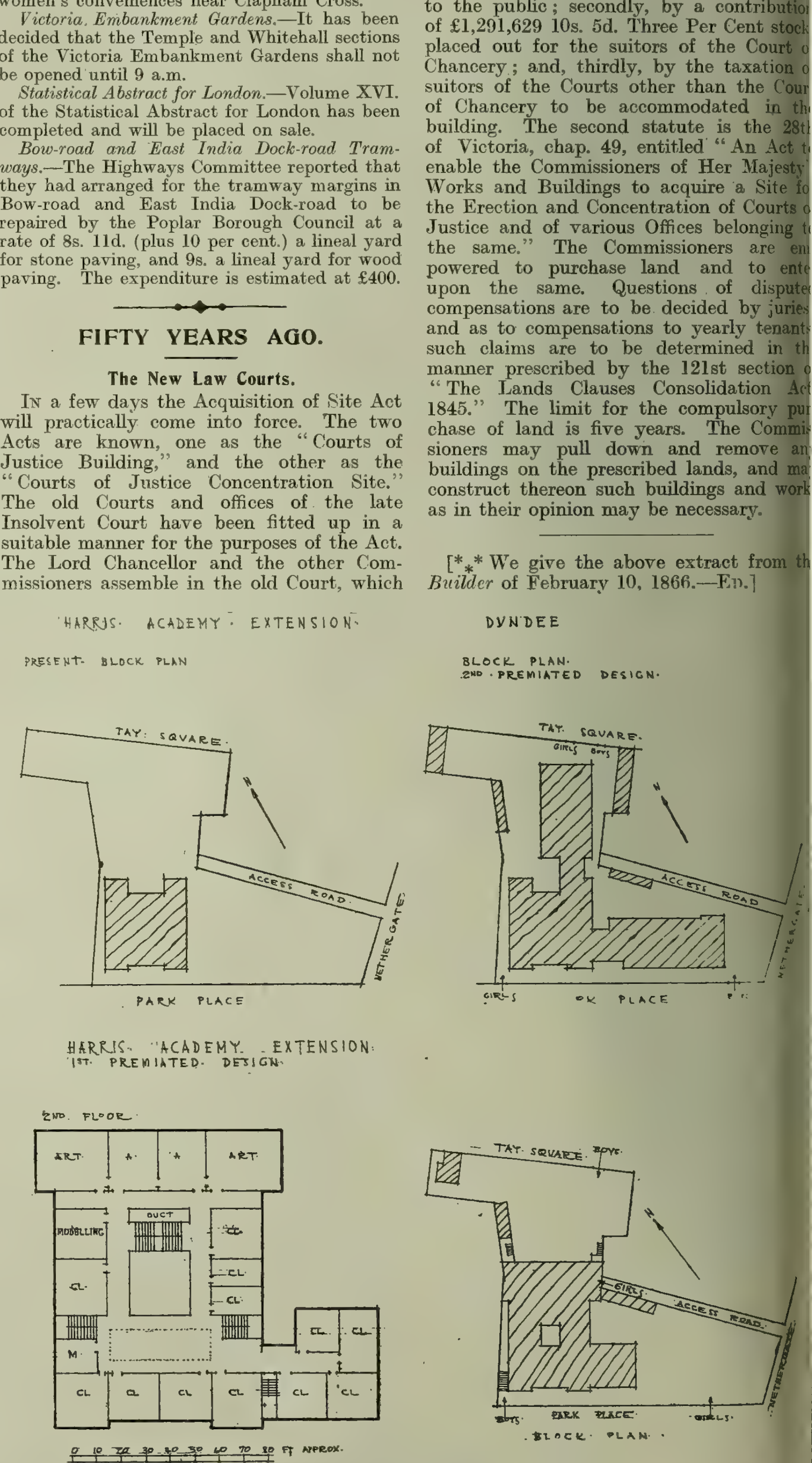
FIFTY YEARS AGO.

The New Law Courts.

IN a few days the Acquisition of Site Act will practically come into force. The two Acts are known, one as the "Courts of Justice Building," and the other as the "Courts of Justice Concentration Site." The old Courts and offices of the late Insolvent Court have been fitted up in a suitable manner for the purposes of the Act. The Lord Chancellor and the other Commissioners assemble in the old Court, which has been very much improved in appearance, and the new Court, called "The Courts of Justice Compensation Court," wil be held in the Court where the late Mr. Commissioner Phillips presided. The first statute in the new Courts is the 28th o Victoria, chap. 48, entitled "An Act t supply Means towards Defraying the Expenses of Providing Courts of Justice an the various Offices belonging thereto, an for other purposes." The cost of erectin the Courts will be borne by money provide by Parliament to the extent of the value o property surrendered, and of relief to th public by the cessation of rents now charge to the public; secondly, by a contributio of £1,291,629 10s. 5d. Three Per Cent stock placed out for the suitors of the Court o Chancery; and, thirdly, by the taxation o suitors of the Courts other than the Cour of Chancery to be accommodated in th building. The second statute is the 28t of Victoria, chap. 49, entitled "An Act t enable the Commissioners of Her Majesty Works and Buildings to acquire a Site fo the Erection and Concentration of Courts o Justice and of various Offices belonging t the same." The Commissioners are em powered to purchase land and to ente upon the same. Questions of dispute compensations are to be decided by juries and as to compensations to yearly tenants such claims are to be determined in th manner prescribed by the 121st section o "The Lands Clauses Consolidation Act 1845." The limit for the compulsory purchase of land is five years. The Commissioners may pull down and remove an buildings on the prescribed lands, and ma construct thereon such buildings and work as in their opinion may be necessary.

[*** We give the above extract from th *Builder* of February 10, 1866.—ED.]



Harris Academy Extension, Dundee. (*See page* 123.)

CIVIC DESIGN SECTION.

Lower Mall from the Bridge.
(From "The London County Council Survey of London: Vol. VI.—Hammersmith.")

THE DEVELOPMENT OF TOWN PLANNING.

T is unfortunate for the progress of the town-planning movement that the war should have come so soon after attention had been directed to the importance of a larger nore communistic spirit in the development own and country. Initially all great ovements are bound to involve considerable nditure, and at the present time we suffer the want of adequate data as to the ased revenue which may be derived improvements which often seem to ve sacrifice of revenue-producing space. in the near future, when peace returns we are confronted with the conditions of w world in which the demands on finance be multiplied, money will be very dear, the tendency must be to restrict its uses nterprises involving the fewest speculative ents. Instead of an age of idealism we expect a greater emphasis to be laid on ractical requirements of our daily life. In words, the results of war will be to nasise the practical and commercial element r lives, and architects and artists will be l to bear this in their minds. The poetry r life must arise out of the picturesqueness rge conceptions applied to utilitarian nes, and the great movements of the near e should be evolved from the wants of a nercial present rather than from poetical rtistic abstractions.

e development plan of Greater London, n is being carried out through the agency of London Society, is highly practical and tune, since by it the organised relief to ects during the war is effected, while it e first and necessary step towards the lination and understanding of the immense ems which have to be solved before the merated area of developed land which all London can be reduced to a logical

en finished, the plan will contain imagi- e proposals, founded on ascertained facts, lown for the first time in complete form: rterial roads recommended by the London c Branch of the Board of Trade, with sted modifications; also an endeavour to linate the numerous town-planning schemes l London, combined with an attempt, by s of a Parkway system, to link up as far as possible the 2,000 open spaces in Greater London.

Thus for the first time the future requirements of Greater London will have been studied as a whole and shown in a complete and comprehensive manner. The cost will be about £1,000, apart from the cost of reproduction. This large sum is being provided independent of the Society's funds, and spent entirely in giving employment to the draughtsmen engaged on the plan, the directors and others interested giving their time and services without charge, and the Society lending their premises free of all expense.

To give some idea of the extent of the work which is being attempted it may be stated that when completed the plan will be about 20 ft. square, the ground treated covering an area of approximately 700 sq. miles. The plan can be seen in course of preparation by members and friends at any time at the Society's offices, and at the conclusion of the war it will be publicly exhibited as the Society's contribution to the development of London.

Local authorities have substantially agreed among themselves as to the course of the proposed new arterial roads, but the difficulty of devising machinery for obtaining funds to carry them out will be greatly increased by the war, and it will be less easy to prevent local development which would interfere with the schemes laid down, the postponement of which for reasons of finance may be expected.

In Birmingham the question has been settled by consent, those having sites abutting on new arterial roads paying for the cost of 40 ft. of the road, the cost of the width in excess being met partly by the ratepayers and partly by the Road Board. Such a plan, admirable in its way, can only apply to undeveloped districts, the problem of effecting improvements in developed districts being much more complicated.

Before the war the relative advantages of Betterment and Recoupment were under consideration here and abroad. Betterment consisting of charging properties the value of which can be shown to have improved with half the value of the improvement, and Recoupment by means of which a local authority is enabled to buy more land than it requires in order to sell it at a profit, the only successful application of which in London is Northumberland-avenue and in Paris the Champ de Mars. It is possible that the results arising from Betterment might be different if the areas scheduled were greater and the period in which the improvements were held to be created were extended from three years to ten or more.

But unless mutual co-operative schemes between owners of town property in districts where new roads are required can be agreed upon it seems likely that the financial results of war will be to make it necessary to wait longer for the institution of much-needed improvements in our towns, and that a large part of the town planner's activities must be directed towards getting such an amount of support as will secure the adoption of necessary schemes in principle and the laying down of restrictions which will prevent smaller improvements being made which would be inconsistent with them, for available funds will, in the near future, be taken up with the provision of absolutely necessary housing and industrial developments in the direction of the erection and financing of the warehouse, factory, and shipping facilities necessitated by the greater part which we believe this country will have to play in the world's commercial life.

LONDON COUNTY COUNCIL SURVEY OF LONDON.*

THE parish of Hammersmith was until 1834 part of Fulham, and it is rightly associated with the northern shore of the Thames between Fulham and Chiswick, though, in fact, only a small part of the parish lies along the riverside, the remainder stretching northward as far as the Harrow-road. The origin of the name is obscure. It is stated that an early form was Hermodeswode, but it may have been Hamers Mythe (O.E. for the mouth of a river), as a reference to Rocque's map shows that which is now called the Creek, and divides the Upper and Lower Mall, was as late as 1745 the mouth of a considerable waterway, which would have been the ideal place for an early settlement.

To the architect the chief interest of this admirable publication lies rather in the illustrations of Old Hammersmith than in the 143 pages of descriptive letterpress which accompany them.

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* Issued by the Joint Publishing Committee representing the London County Council and the London Survey Committee. Vol. VI.—Hammersmith. (Published by the London County Council, Spring-gardens. 25s.)

Bradmore House, which has been fortunately preserved and re-erected to form the offices of the London General Omnibus Company, is shown in some twenty plates, the fine woodwork being refixed in a billiard-room, to which, by arrangement with the London County Council, the public is given access once a month. We illustrated the building in our issue of April 16, 1915.

Old St. Paul's Church is illustrated by a reproduction from an old drawing, and photographs of the pulpit removed from All Hallows, Thames-street, and the monument to Sir Nicholas Crispe. Vincent House, Kent House, 11 and 12 and 21 and 22, Lower Mall are shown by drawings and photographs, which prove how rich London is in fine old Georgian houses. We should have liked to see Hampshire House, which is of great interest and charm, rather more amply illustrated than it is by the general view and wrought-iron gateway detail. Sussex House, Upper Mall, is a good and typical Georgian piece of brickwork, with a delightful doorway shown on plate 62. Kelmscott House—the residence of William Morris—River House, and 22, Upper Mall are shown by a general plan, and some good photographs of Kelmscott House show its details to advantage. The "Queen Dowager's" House in the Upper Mall is reproduced from old drawings. Hyde Lodge, Upper Mall, is a characteristic simple Adam design; while Upper Mall House represents the more vigorous early period.

The Library, Ravenscourt Park, with its fine staircase and ironwork, and representations of the older taverns, appropriately complete the volume, together with Blythe House, with its dignity and Greek mannerisms. The carefully-prepared map, in which the buildings recorded and illustrated are shown in red on a plan, will readily enable the wayfarer to find his way about the historic quarter of Hammersmith, especially as it is comprised within a narrow belt along the river's edge and south of the Hammersmith-road, Broadway, and King-street. Within this district, ⅞ mile long and ¼ mile broad, are to be found all the objects of interest dealt with in the volume, and, while they are not equal to either Chelsea or Greenwich in architectural importance, the undeniable character and interest of Old Hammersmith must be recognised by all lovers of art. It is almost unnecessary to add that the volume is prepared with the accuracy and care of the previous volumes which we have reviewed.

THE ORGANISATION OF BUILDING AFTER THE WAR.

We have before us the preliminary programme of a National Congress to be held under the auspices of the National Housing and Town Planning Association at Caxton Hall from Tuesday, April 11, to Friday, April 14. The subjects to be dealt with are:—

1.—(*a*) The preparation of housing schemes for the building of urban and rural cottages, these schemes to be put into operation at the close of the war, so that the danger of serious unemployment in the building trades may be avoided. (*b*) The provision by the Government at the close of the war of the necessary capital to enable such schemes to be carried into effect. (*c*) General housing finance at the close of the war.

2.—(*a*) The need for financial aid and encouragement being given by the Government to local authorities in the preparation of schemes for the clearance of insanitary areas. (*b*) Consideration of the results in the better citizenship and greater productive capacity following on the raising of the standard of life of the people as a result of the improvement of housing conditions.

3.—(*a*) The provision of homesteads with small holdings, and the intensive cultivation of land. (*b*) The reorganisation and extension of the methods by which capital can be provided to aid all classes of cultivators of the land, so that the rural resources of the kingdom can be adequately developed. (*c*) The possibility of carrying into effect schemes for settling disabled soldiers and sailors on the land. (*d*) The preparation of schemes for afforestation, and for the reclamation of waste lands.

4.—The preparation of town-planning schemes in anticipation of future developments, and more especially schemes for the construction of new arterial roads, playgrounds, and other open spaces, so that if employment is needed for unskilled workmen at the close of the war these workmen can be employed at tasks of real service to the community.

5.—The possibility of adopting new and cheap building materials and securing economies in the design of cottages, provided that the essential standards of good building construction and of the wholesome environment of dwellings are not impaired.

In an explanation of the objects aimed at it is pointed out that, although we may with some truth assert that we had little reason to anticipate war, we have no excuse for not anticipating the advent of peace, which we know is a certainty sooner or later, and that when peace comes we may have to face a situation which, if we are unprepared, may entail on posterity evils equal to or greater than those of war itself. Although in the shipbuilding and mining industries it is possible that the returning labour may be utilised and absorbed at once, this cannot be said to be the case with respect to building, unless steps are taken in good time, and, though by slow demobilisation this danger can be in part averted, the cost of such a policy would be very great, while the industrial waste involved would be practically that entailed in the institution of most forms of relief waste. It is pointed out that if 200,000 building trade workmen are kept "with the colours" in order not to flood the market they will cost in food, shelter, clothing, and allowances to dependents at least £2 10s. a week, or £500,000—*a sum which, if devoted to setting workmen to construct cottages, would in the course of six months defray the cost of building* 65,000. It is clear therefore that by the proper preparation for peace in the building trades, and no doubt in many other industries, a sum can be saved compared to which the economies which many of those in authority are devoting much time and many speeches to are absolutely trivial.

It is hoped that the appointment of a National Deputation will be approved by the Congress, and that this National Deputation will place the proposals of the Congress before the Government.

The shortage of houses is placed at at least 400,000, of which 120,000 are in rural districts, and that the provision of necessary housing accommodation requires an annual expenditure of £25,000,000 to £30,000,000.

It is not suggested that the State should provide capital till the end of the war, but that the consideration of schemes and plans should be dealt with now; for after the depletion of the national exchequer by war it is more than ever necessary that the community should have the full advantage of the expenditure of money available when peace returns.

Invitations to attend the Congress are being sent to the various city, urban, and rural authorities in Great Britain, and the membership fee of 21s. will cover the cost of printing and circulating all reports and papers published in relation to the Congress. Any questions relating to the programme should be sent to Mr. Henry R. Aldridge, the Secretary, at the offices of the National Housing and Town Planning Council, 41, Russell-square, London.

We consider the proposals made are exceedingly important and practical, and trust in the interests of the community that the Congress will meet with the fullest measure of success.

HOUSING IN WALES.

The Report presented to the annual meeting of the South Wales Garden Cities and Town Planning Association, at a meeting held at the Engineers' Institute, Cardiff, recently, indicated that considerable progress had been made during the year. Mr. D. Lleufer Thomas, who presided, moved the adoption of the Report, this being seconded by Mr. J. T. Clatworthy and unanimously carried. The Chairman moved the re-election of Lieut.-Colonel David Davies, M.P., as President. This was seconded by Lieut. Henry Davies, and carried. Mr. D. Lleufer Thomas was unanimously re-elected Chairman, and Mr. Lovat Fraser Hon. Treasurer.

Mr. Alwyn Lloyd read a paper (written
the Treasurer) on "Housing and Town Planni
in Relation to Unemployment and other Afte
War Problems." There must, said Mr. Frase
be no panic after the war. The abnorm
activity would come to an end, to be followe
after a year of depression, by feverish activi
owing to the rebuilding of the ruined countri
This might last for three or four years, b
this, he predicted, would be followed by lo
years of depression. To provide employme
it was suggested the Government should und
take the problem, and Mr. Seebohm Rowntr
had suggested the extensive erection of workin
class houses. Public authorities shou
encourage co-partnership, and land should
leased to societies willing to build, and t
Government should urge local authorities
prepare town-planning schemes now.

Mr. A. Williams dwelt on the improveme
in the health and morals of the people resulti
from improved housing, instancing Liverp
as a case in point. Mr. Maddison urged th
platitudes should be translated into actio
The Government should take proper actio
The matter was too important for priva
effort. Mr. Culpin said that if £5,000,0
a day could be spent on war, then the mon
for 400,000 cottages should not be so diffic
to get. He moved that local authorities shou
prepare town-planning schemes and also pla
for road construction and cottage buildi
and also that the Government should be ask
to announce as soon as possible its intentio
with regard to the financing of housi
schemes. Mr. Ruthen (Swansea) seconde
This was carried.

Lieut. Henry Davies read a lett
refusing work to a man who had been in t
Army. He proposed that the Associati
should get into touch with General Ow
Thomas, who was already preparing a sche
for meeting unemployment both now a
after the war. The Chairman spoke of t
peril of delayed demobilisation, and refer
to the danger of further emigration, stati
that the country could ill afford to lose a
more men. There would be an accumulati
of arrears in building, and the private inves
would have but little money, and they wo
have to look to the Government for finance.

In reply to Mr. A. Williams, Mr. Cul
said that the Association already had ta
up the matter of combines in the bui
ing material trade. Mr. Culpin second
Lieut. Davies's suggestion, which was carrie

Speaking on the "International Gar
City Movement," Mr. Culpin said that
Russia, Spain, France, Canada, and the Uni
States garden city schemes were being form
He paid a warm tribute to the Associatio
"Welsh Housing Year-Book," and to
Edgar Chappell, the Secretary of the So
Wales Association, who had prepared
publication.—*South Wales Daily News.*

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THE SURVEYORS' INSTITUTIO

An ordinary general meeting of the S
veyors' Institution was held on Monday
No. 12, Great George-street, Westminst
S.W., Mr. A. L. Ryde in the chair.

The minutes of the previous meeting w
read and confirmed.

It was announced that nine publications
been received for the library, in addition
two donations of two guineas each, and it
agreed that the thanks of the Institution
sent to the donors.

Mr. Charles F. Slater (Fellow) then rea
paper entitled "Dilapidation Practice: S
Notes and Suggestions," in the course
which he commented on:—

(1) Instructions and survey;
(2) Special covenants;
(3) Dilapidation during war;
(4) Schedules of condition;
(5) The effect of dilapidations on the v
and marketability of property;
(6) The Report of the Land Inquiry C
mittee on Dilapidations.

In the year 1844 the R.I.B.A. formul
a definition of dilapidations as follows:—

"For practical purposes dilapidations
in usual practice understood to be t

cts only which have arisen from neglect isuse, and not to extend to such as only ate age, so long as the efficiency of the remains. But if the effects of use or have proceeded so far as to destroy the or its efficiency in the structure, this es neglect or misuse, it being the pre- tion that at the commencement of his the tenant was satisfied that every part sufficiently strong to last to its close." definition formed a common basis of prac- for seventy years.

Survey.

the course of the paper the author :—

Every surveyor will have his own notions e order in which he takes his particulars specification of dilapidations. My own rence is for exterior of main building then the interior from top to bottom, by room, and lastly the appurtenant lings and grounds. In country work it pecially necessary to check off very care- at the finish the description of the ises in the lease and plans with the lings inspected, making quite sure nothing been missed. It is annoying to find that om's cottage about a mile from the man- has been overlooked. The dimensions of room, including the height, are well h taking as a means of checking the urement of work, but not in substitution of. This applies to exterior measurements. am told it is quite an easy matter for a ised hand to run through a moderate- house and put his figures on a half-sheet per, but this method is not to be com- led, however experienced the surveyor be. I remember watching a bout between ss-examining K.C. and a witness armed one of those half-sheets. I am sure the ess in question actually knew this work better than I do, but the half-sheet of r produced on the face of the Referee a of holy horror which boded ill for the ess. Needless to say, floor plans are fre- tly useful, as well as scale sketches of rtant parts. The camera is not to be sed. In the preparation of a specifica- for the landlord the qualified surveyor turally careful to include only such work roperly can be claimed. In settling a qualified man there is little difficulty. metimes claims are made on incomplete uctions or on imperfect knowledge of law facts. In meeting such claims a general round at the first evidence of excess may se the necessity for particular care in g objections. Experience is the only of what to observe. If a fight should , the value of sketches in illustration of jection and made at the first survey are valuable.

Measure of Damage.

estimating dilapidations regard must be o the legal principle that the measure of ge is limited to the depreciation in value e reversion. At the end of the term r according to covenants or the cost of is generally all we have to trouble , as that is fairly clearly the measure of ge to the reversion. The distinction een damage to reversion and cost of rs would appear to be easy of applica- in a case where a lessee, say for twenty- ears, covenanted to paint in each seventh and had not kept strictly to the time- . He could not be penalised in damages g the term unless damage could be shown e reversion, but if, for instance, he ed in the twentieth year instead of the y-first, the reversion would be depre- d, and he would be liable to paint again. raw a like distinction at the end of the where premises are coming down is not ny means so simple a matter. Where a holding under full repairing covenants s the fabric to fall into such disrepair at the end of the term the lessor has ically no alternative but to rebuild, the t compensation should be made to the for the damage he has sustained. But a lessee holding under the like ants has kept the fabric of his building od repair, and the lessor finds that owing anges in the neighbourhood it will pay o pull down and rebuild, he should not be entitled to damage, which in fact his reversion has not sustained. This is not universal practice, but it has always seemed to me to be the proper interpretation of the legal principle of damage to the reversion.

Where there is an Express Contract to Repair—Tenant's Obligation.

It is necessary to observe the distinction between a general covenant to repair, which impliedly covers all buildings on the land demised, and a repairing covenant which is limited in terms to the buildings demised, for the latter will not be extended to newly-erected and distinct buildings. It has been contended in some quarters that there is a hardship on a lessee who, having erected buildings for his own convenience, should be compelled under a general covenant to leave them in repair. It is surely hard on a lessor to have to put in repair or clear away buildings he does not want, yet a perfectly legitimate charge for clearing away is not favoured.

It is not unreasonable to assume that on the grant of a lease a tenant is satisfied with the premises he is taking and a landlord with the rent he is receiving. The need for future additions cannot always be foreseen, but where it arises and is acted upon it seems as unreasonable for a tenant to object to repair the additions as it is for a landlord to require additional rent for granting a licence to erect them.

Under the covenant "Substantially repair, uphold, and maintain," without any specific clauses as to painting and papering, the general practice seems to be to require some reasonable preservation of decorative items. However old, the decorations if in good condition should be accepted, and, on the contrary, however new, if damaged or badly done should be renewed in keeping with the character of the property.

Dilapidations Arising During War.

A very clear and interesting statement of the law and practice on the subject of damage caused by occupation of premises by the King's Forces was put forward by our worthy President, Mr. John Henry Hanson, in his recent address (*Transactions*, Vol. XLVIII., Part 1). He said :—

"And lastly the matter is now dealt with under statutory regulations in which, save so far as may be contained in a general declaration of principle that interference should be limited to necessity, there is no provision or restriction in favour of owners, nor for payment of compensation as of right. Provision, however, has been made for such payment as of grace, the amount to be determined by a Royal Commission specially appointed to deal fairly and reasonably with the matter."

The obvious course with properties required for military purposes is the preparation of a schedule of condition of the premises at the commencement of the occupation, and this applies generally whether the property taken is urban, residential, or agricultural.

There is said to be a desire in some cases to shelve responsibility, but I have not experienced it. Petty haggling has twice come my way over decorations and furniture under agreements for tenancy by local commands. but the blame for that was less on the military authorities than on the newly-made officers.

Damage by the King's enemies, as you all know, was in the early stages of the war met by relief being given from Imperial funds, a committee being appointed by the Treasury to investigate the damage to persons and property sustained by the bombardment of the Hartlepools, Scarborough, and Whitby by German warships, the air raid on the Norfolk coast, and the air raid on Colchester and the neighbouring district. That was withdrawn last summer, and a system of Government insurance inaugurated.

So far as dilapidations go on premises that are insured, there is one point worthy of note. The Government insurance covers only the interest of the party assured. It is not sufficient, for instance, that a lessor should insure against damage by aircraft and bombardment if his lessee should be liable to him under the covenants of the lease, for in that case he would be compensated only to such an extent as he would not be entitled to recover against his lessee. I have heard of a case where Lloyds on a very open form of policy have taken the same line.

I am advised that it is necessary that in all such insurances the person assured should contract for himself and in trust for all other parties interested. Where not done in the first instance an endorsement of the policy will suffice.

Conflicting opinions exist on a lessee's liability to repair damage caused by the King's enemies. It is difficult to imagine that express covenants to repair will in such circumstances lose anything of their effect against the persons who have entered into them, especially as the contingency, however remote, could have been provided against by specific words in any covenant, and now, moreover, everyone has an opportunity to insure at relatively small cost.

Schedule of Condition of Premises.

Contested cases on dilapidations would be much diminished in number and simplified in issue if landlords and tenants entered into their respective obligations with a full knowledge thereof and with expert advice on the buildings which were the subjects of their contract. In the *Transactions* of this Institution covering the papers of Judge Wheeler and Mr. Pilditch, and the discussions thereon in 1886, it was advocated by several prominent surveyors that a schedule of condition of premises should be taken at the commencement of each lease. In the year 1903 the Royal Institute of British Architects issued a handbook on dilapidations, in which they referred somewhat extensively to this question of a schedule of condition, and in which they gave models of repairing and surrendering covenants for embodying the same, together with a note of the practices obtaining in Continental countries. The report on condition of the premises which the R.I.B.A. suggested should be added to every lease was in the form of an award by one, two, or three surveyors acting after the manner set forth in sect. 91 of the London Building Act, 1894. It should detail—

(1) The premises comprised;
(2) The construction of the buildings;
(3) The defects.

"A full description of the premises and of the forms of the whole and parts to be given; all rooms, or other sub-divisions of the premises, to be named or described; also accesses, passages, staircases, etc. This may be usefully accompanied by plans.

"The nature of the construction to be set forth, as also the materials used for walls, rooms, partitions, floors, windows, and doors, and any special decoration.

"A list to be given of the defects observed on a survey made on the date stated in the report; importance to be given to structural defects, such as walls out of the upright, bulged, settled, broken, or cracked; floors, roofs, staircases, etc., out of level; but minor defects, whether structural or not, should also be recorded."

To carry out this recommendation to the full in every case would seem to involve a vast amount of labour including much that was unnecessary. There are cases, however, in which these instructions should be observed in detail, especially where the premises to be demised are so old or so badly constructed as to cause doubt in the minds of practical people about the fabric remaining good for the full period of the lease.

The practice of attaching a report of condition of premises to a contract of tenancy appears to be growing very slowly, and I think one of the deterrent factors is that of the cost of preparing the same."

Mr. Howard Martin, in opening the discussion, moved a vote of thanks to Mr. Slater for his paper, the motion being seconded by Mr. Graham Mould. The following gentlemen also took part in the discussion—Messrs. Wm. Woodward, Samuel Clarke, C. Herbert Bedells, and Chas. Osenton.

The Secretary announced that the next general meeting of the Institution will be held on Monday, March 6, at 5 p.m., when a paper will be read by Mr. G. Turville Brown (Fellow) entitled "The Management of Estates in Mineral Districts, and Mineral Valuations."

THE BUILDING TRADE.

THE REBUILDING OF BELGIUM.—II.

IN a preceding article* we discussed the legal conditions within which the reconstruction of the Belgian towns has been prepared for. We have made it clear that the Belgian laws have from the present time empowered the Government to give or refuse to towns or villages, or to any special place, the right to carry out the plans they have prepared.

What we wish to demonstrate here is the perfect safety of money investments which may be placed in Belgium after the war, with a view of helping in the great work of restoring the towns and villages ravaged by the enemy. Let us first take the case of a town or a village.

A municipality which has received the approval of the Government for the plans it has prepared cannot start work on this alone.

It is the rule in Belgium that the financial side of the plan must also be approved. All estimates of the cost of the work, after having been drawn up by the Finance Committee of the town, the faubourg, or the village, is presented to the Conseil Communal, which in its turn nominates a committee to study and discuss the question. When this is done a representative chosen by the committee lays before the Conseil Communal the result of their deliberations and advises as to the approval or otherwise of the estimate.

These committees are held publicly, and any criticisms are allowed and considered. In fact the inquiry is most complete and thorough.

Supposing that the scheme is finally approved by the municipality, plans and estimate are submitted to the "autorités provinciales," a permanent body composed of architects of provinces, provincial financial committees, and the Governor of the province. Only after this, if it is approved, with or without alterations, is it placed before the Minister appointed to deal with these matters.

After he has passed it comes the examination from the artistic and architectural standpoint, which is made by the "Commission des Monuments." Passed by this last committee the plan can be carried out, and from henceforth it will have the Government guarantee, as the Minister of Public Works does not sign plans unless they conform with the ideas laid down by royal decree. But the powers of the Government do not end here.

The works are inspected by their architects and engineers, by the architects of the provinces, and more particularly by the inspectors, who are constantly on the scaffolding. In considering the financial estimates for work the question most carefully studied by the authorities is that of the monetary resources of the municipality in relation to the amount they will be compelled to borrow for the work; the means of paying off this debt; and, if a loan is required, which will in general be the case, the character of the creditor, the amount of the loan, and the time for which it is to run.

Before the war, for public works, schools, churches, hospitals, etc., the Government and the provinces always granted a subsidy of from one-tenth to one-sixth of the total cost of the building.

Several questions naturally present themselves for solution.

What will be the financial position of the Belgian Government on the declaration of peace? What will be the financial position of the Belgian people, of the Belgian societies, and of the Belgian banks at that moment? What will be the extent of the damage done? These are questions which must remain unanswered. We do not know what the results will be of the months of war which are still to come; but what we do know is this, that if we were reduced to our last penny the working power of our industrious people would prove to the friendly Powers that their money, if they decided to help us, would be as securely placed as had been their confidence in our loyalty before and during the war.

We might perhaps have argued that in the event of a refusal being sent to the German ultimatum we could expect to see our country ruined and devastated and our people slaughtered, but that if in spite of that we did not hesitate to bar the road to the invaders, a true battle of pygmies against giants, sacrificing our all unanimously and unhesitatingly to our international obligations, we should in consequence expect that the countries which have benefited by our attitude would come to our aid after the war.

This argument will certainly not be used, because Belgium, unhappy but proud all the same, has resolved to rise again from her ashes, asking only for the help of her friends, help which she hopes to reward.

In the restoration of towns, suburbs, and villages it is obvious that the municipalities will only concern themselves with the plans for public buildings and of any expropriation to be made, and in that case with the allotment of the building sites.

Private buildings will be left, as everywhere else, to the initiative of individuals in so far as their plans are in harmony with the plans of the administrative bodies. In the case of someone who is compelled to build on his land, either as the result of damage done or of expropriation, and who has not the money needful, he can go to building societies which existed in Belgium before the war, and which will certainly continue their work after the war, even though they may have temporarily disappeared.

The societies, as is probably the case in England, lend money to people who wish to build, after examining the plans and the estimate of the contractor and the sum required for the completion of the building.

The repayment of the sum lent is usually done by annual instalments, the interest being about 4 per cent. and the duration of the loan from ten to thirty years.

Here again these matters are arranged so as to ensure perfect security.

In proportion to the progress of the building the contractor is paid by the society itself, and only after searching inspection of the work done and of the materials used. A sum amounting to a tenth part of the estimate remains in the hands of the society until the work is definitely approved, which is done a year after the building is finished, by the architect of the building and the experts of the society. Consequently, as far as the building goes, the society runs no risks, and the same precautions are taken with regard to the property itself. To this end the society holds a mortgage on the house and ground of the value of the sum lent, until the loan contracted by the owner is entirely paid off.

The mortgage is hedged with so many conditions that the creditor can feel perfectly secure, and need not trouble further beyond making sure that the property is in a good state of preservation.

The work of these societies had such a wide range before the war that there were very many clerks and workpeople who owned their houses.

The big towns and even the unimportant ones increased rapidly with their new suburbs of little one-storied houses, neat, pretty, and individual in character. The payments made by those small owners were very little higher than the rent of a house of the same standing as their own, and they usually found it best to insure their lives, which would leave the property unencumbered in the event of their death.

Thus it is clear that if, as a result of the war, the building societies will not be in a position to operate with their own capital, allied financiers need not fear to invest their clients' money in those enterprises which have made their mark in Belgium.

The money will increase, the capital will find it a good investment, and, above they will help in a work whose social valu of immense importance, because, to take o the question of saving (and is not thrift enemy of drink ?), the Belgian people h been attracted in large numbers by the pros so pleasant to everyone of owning, no ma how small, his home.

CHAS. PETEIN,
Architect (Brussels

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* See our issue for January 7, page 26.

PROVIDENT INSTITUTION BUILDERS' FOREMEN AN CLERKS OF WORKS.

MR. WILLIAM WOODWARD, F.R.I.B.A., t the chair at the thirty-second annual di of this Institution on Saturday night, was supported by Sir H. Bartlett, B Messrs. A. W. S. Cross, F.R.I.B.A., H. No croft, A. H. Adamson, F. G. Minter, A. Rit B. Carter, etc.

The Chairman, in proposing the toast the Institution, said it was one which dese their sympathy and support. It was initi in 1842 for the purpose of granting pens to aged and infirm members, their widows children, and for making grants of tempo relief. The total amount paid in pens was over £20,000. Last year £755 was gra in pensions. Fifteen men received £546, ele women £174, and five children £33. In addi £30 was granted in temporary assista He was sorry to say that last year there w decrease in the income, and the directors not able to give pensions of so high a sum in past years, although, as they knew, cost of living was higher. The Institu was not carried on without strenuous work the part of the directors and officials. He had many interviews with the Secretary, Searchfield, and could say he deserved t warm thanks for all the trouble and tim had taken in bringing the dinner to the suc it was. Every architect would agree that builders' foreman could be, and frequently of the greatest possible assistance to architect, and when he himself started a the first thing he did was to ask the fore if he saw anything by which he thought job could be improved to let him know. had always got on well with the foreman, could say the same of the clerk of works. saw that Mr. James Brown, in an admi paper read before the Manchester Societ Architects, said: "The clerk of works without benefit to his clients' work, easily the builder to a large amount of very unn sary expense, but a real competent cler works is not only of value to the arch and his client, but also to the capable bu who is working under his supervision." believed all his architectural friends w agree with that. The present was a bad to ask for money, and so far as the architec profession was concerned he hoped it c not be in a worse condition than it was, seeing that architects were at a standstill a certain extent must be the builders. Government in its wisdom had put a sto building, and now they proposed to stop import of building materials. Architects tried to get a reduction in their income tax the Government would not listen to it. the less he hoped they would support su deserving institution, so that help migh given to those who fell by the way.

Mr. J. Beer responded for the Institution in urging its claims, said that there wa body of men more loyal to their empl than builders' foremen. They had a nu of cases now waiting to come on the pe fund, but they were determined not to t on their reserve fund, and if contribu did not come in they would have to dec the pensions still more, which in these would be deplorable.

H. Bartlett, Bart., who reminded his rs that it was twenty years ago that he led at the dinner, proposed “The tects and Surveyors.” He referred to plendid way in which so many had gone to fight for the country, and said that left behind had great difficulties to contend He heard that ladies were now hing on the architects' profession, and he red architects would show good feeling rds the movement. They had heard of ifficulties of architects and surveyors, but was one grain of comfort—the cost of ing was increasing, and they would receive nission on larger sums.

. A. W. S. Cross, in reply, said the archi- ral profession was indeed passing through lous times, but in military parlance they trying to “carry on.” He was afraid contributions from architects to the ution that night would be below the ge. He cordially agreed with the man as to the debt of gratitude architects to builders' foremen and clerks of works.

. H. Northcroft said he recently made a y of a mansion designed by the lady of place. She did not employ a quantity yor and was her own builder. He was l to say it was not so bad as it might have He would like to say one word as to andardisation of quantities and of methods easurement. They had recently published nphlet on the measurement of plasterers' , but the master builders seemed to find with it. Seeing how cordially they had orted him in his efforts to bring about ardisation he had hoped they would have this a good reception.

e Chairman, in giving the toast of “The ers and Contractors,” said that without detriment to the interests of his client rchitect could be a friend of the con- or, and it was to the interest of the architect e that the contractor got all that he was entitled to. He believed that was the g of most of the members of the profession ich he belonged.

. A. H. Adamson, in reply, said with regard e question of standardisation he had only tly been elected on the Council of the on Master Builders' Association, and did now much about the matter, but a con- or near him whispered, “Don't forget that ers were not consulted on the question e standardisation of quantities.” They passing through bad times, but they were g efficient. They heard a lot about my, but the keynote of economy was ency, and when they learned to do the work had to do efficiently they could snap their s at German competition.

. F. G. Minter proposed “The Governors, ees, Donors, Subscribers, and Visitors,” was acknowledged by Messrs. Alex. ie and Ben Carter. The health of the man was enthusiastically drunk on the sition of the Mayor of Hampstead.

OPOSED NEW BUILDINGS AND OTHER WORKS.*

these lists care is taken to ensure the racy of the information given, but it may ionally happen that, owing to building rs taking the responsibility of commencing before plans are finally approved by the authorities, “proposed” works, at the of publication, have been actually com- ed. Abbreviations:—T.C. for Town cil; U.D.C. for Urban District Council; C. for Rural District Council; E.C. for ation Committee; L.G.B. for Local rnment Board; B.G. for Board of dians; L.C.C. for London County Council; for Borough Council; and P.C. for Parish cil.

ersham.—The R.D.C. has approved the wing plans:—One cottage, Rickmansworth- , Amersham, submitted by Messrs. Bulley & ard, for Mr. A. Saunders; two pairs of ges, Heath End, Great Missenden.

ghton.—The Parochial Committee has ed plans of proposed power house, “Laner- ” Winifred-lane, for Mr. G. Steel; and of osed works off Parr's-lane, for Mr. Daniel er.

rwell.—The Barwell P.C. is considering question of the provision of working-class lings for the parish.

Basingstoke.—The T.C. has passed plans for extensions to Messrs. Thornycroft's works, for alterations to Messrs. Freeman, Hardy, & Willis's premises in Winchester-street, and to a shop in London-street, for Mr. T. Burbery.

Bethnal Green.—Plans of a proposed Bethnal Green public library have been approved by the Carnegie United Kingdom Trust.

Birmingham.—Owing to the shortage of housing accommodation in Birmingham the Trades Council has appointed a deputation to interview the Lord Mayor on the subject and to urge immediate action to relieve the situation.

Blackrock.—The L.G.B. has held an inquiry into an application for a supplemental loan of £2,200 by the Blackrock U.C. in connection with the Brookfield and Booterstown Housing Schemes.

Bradford.—At a recent meeting of the Health Committee of the Corporation a resolution was passed in favour of the erection of a central laundry on a portion of the present disinfecting station in Valley-road.

Braintree.—Plans for the erection of a new building at Manor Works, for the Crittall Manufacturing Company have been passed by the U.D.C.

Bromley.—At a recent meeting of the T.C. the following plans were recommended for approval:—Mr. J. E. Tyler's plan of five new houses, 13 to 21, Herbert-road; Mr. F. G. Crickett's plan of new house between 19 and 21, Howard-road.

Burton.—The Guardians have adopted a recommendation of the Hospital Committee providing for fencing and for internal alterations to the Receiving Home, to fit it for the reception of imbecile patients from the Stoke Union at a total cost of £65 10s.

Cambridge.—Plans passed by the T.C.:—House and shop, Mill-road, Mr. C. Ivett, Romsey-road; garage, Cherryhinton-road, Mr. W. E. Archer, Cavendish-avenue; van shelter, Cherryhinton-road, Mr. W. Chapman, 41, Rock-road.

Coatbridge.—Coatbridge Dean of Guild Court has given authority to Messrs. William Beardmore & Co., Ltd., to erect a temporary building at Speedwell Ironworks.

Doncaster.—The T.C. has resolved to lay gas to 200 new houses proposed to be erected at New Edlington.

Durham.—The Finance Committee has recommended the C.C. to make application to the L.G.B. for its sanction to borrow the sum of £950, required for the purchase of a school site at Witton Gilbert.

Ellesmere Port.—A new industry under the Ministry of Munitions is to be established in Ellesmere Port. The site for the new works is to be on the estate of the Ship Canal Portland Cement Company.

Glasgow.—A petition has been presented to Port Glasgow Dean of Guild Court for permission to make extensive alterations on the shipbuilding works recently acquired by Messrs. Russell & Co. The plans have been approved, and permission granted meantime to demolish existing buildings.

Golcar.—The U.D.C. has approved the following plans:—House at Swallow-lane, for Mr. H. Crowther; warehouse at Brook Mills, for Messrs. W. & E. Crowther; and oil warehouse, for Messrs. J. Haigh & Co.

Halsted.—The L.G.B. has given its sanction to the B.G. expending £248 in installing a new boiler for the heating of the workhouse and for providing steam for the cooking apparatus.

Hartlepool.—The £1,500 given to the town by Mr. William Cresswell Gray, D.L., shipbuilder, to assist the Corporation in their housing scheme in the Cleveland-street district, has been allocated to the purchase of old property, which is to be pulled down and replaced by modern workmen's dwellings.

Hornsey.—Plans passed by the T.C.:—Three pairs of semi-detached houses, Fordington-road, Muswell Hill, by Mr. Charles Tucker, Fortis Green; redeposited plans for additional shop adjoining No. 373, Archway-road, Highgate, by Mr. Charles Gordon; and plans for the conversion of one dwelling-house into two tenements at No. 78, Weston-park, Crouch End, by Mr. John Farrer. The Council has also given permission for the temporary conversion of a dwelling-house into two tenements at No. 24, Stanhope-road, Highgate, by Mr. Frank Collins.

Kingsbury.—At a recent meeting of the D.C. it was agreed that the temporary buildings licence granted to the Aircraft Manufacturing Company, Ltd., in respect of their new factory premises, Grove Park Estate, Kingsbury, be amended to include lavatory accommodation, boiler-house and chimney shaft, etc. It was also agreed that the application and plan submitted by Messrs. Foyer & Co. on behalf of Hemings Trustees for proposed new drain at Valley Farm, Kingsbury, be approved.

Kingstown.—The Kingstown Pavilion Company have obtained an expert who, with Messrs. Kaye Parry & Ross, will prepare plans for a new pavilion to be erected in place of the one destroyed by fire.

Lanchester.—It is proposed that a new school for about 120 scholars be provided at Lanchester.

Leeds.—A scheme for the laying-out of the Buckingham House Estate, situated between Headingley-lane and Victoria-road, Leeds, has been approved.

Lewes.—Repair of workhouse roof for the B.G.

Linthwaite.—The U.D.C. has approved plan of a bakery at Cowlersley for Mr. Herbert Kilburn.

Little Stanmore.—The Hendon R.D.C. has approved the plans of temporary sheds which are required at the Edgware (main) road Depôt at Little Stanmore.

Llanelly.—The Carmarthenshire C.C. recently considered a letter from the Llanelly Town Clerk with reference to their proposal to extend the Furnace Council School.

London.—The licensing justices have sanctioned plans for certain alterations at the Clarence Hotel, 88, Aldersgate-street, licensee, Mr. John Coltman. They have also given consent to enlarge the Regent Restaurant, Rood-lane, Mr. Edgar Alexander Baylis, licensee. The L.C.C. has arranged for the execution by the staff of the Tramways Department of further repairs to the paving of the carriageway (outside the tramways area) of Battersea Bridge, also for the Council's jobbing contractors to carry out alterations to the kerb in front of the new tramway shelter on the Victoria-embankment, between Temple-avenue and Carmelite-street. The L.C.C. has granted permission to the Metropolitan Asylums Board to build an office or hut on an enclosed site on the river side of the Victoria-embankment, between Charing Cross pier and the abutment of Charing Cross railway bridge. It has also approved a plan of a proposed substitution of escalators for lifts at Stockwell Station. The Improvements Committee of the L.C.C. has sanctioned expenditure in the undermentioned cases for the execution of the works specified:—(1) Paving works in Bromley-road, £125 4s.; (2) payment on account to the Commissioners of H.M. Works, etc., in respect of extension of Victoria Tower Gardens, £93 17s. 10d.; (3) paving works at the corner of Old-street and City-road, £150; (4) paving works in High-street, Wandsworth, and East-hill, £50; (5) works of setting back certain properties along improvement routes, £807 1s. 8d. (additional expenditure); (6) fencing and fixing gates at certain properties, £65 8s. The Committee has also sanctioned the erection on Hampstead Heath by the National Council of the Y.M.C.A. of a marquee to be used in connection with the supply of provisions to troops on the Heath.

Manchester.—The City Council is to be asked to consider the desirability of placing suitable land at the disposal of the L.G.B. for house building, and to endeavour to obtain their assistance in financing a civic housing scheme. The Electricity Committee proposes to provide additional plant at the distributing stations, and to make provision for hired motors at an estimated cost of £40,000, and the Council is asked to agree to an application to the L.G.B. for permission to borrow that amount.

New Zealand.—Plans have been approved by the Dominion Government for the carrying out of hospital extensions at Auckland, at an estimated cost of £21,000.

Ormskirk.—The Council has approved a plan of proposed raising of office building at the Ropery, Wigan-road, for Messrs. H. J. Jones & Co., Ltd.

Plymouth.—At a recent meeting of Plymouth Lunatic Asylum Visiting Committee Messrs. Thornely & Rooke & Barron submitted plans for the extension of the asylum buildings at Blackadon. The plans were approved, and will be forwarded to the Board of Control for confirmation.

Porthcawl.—At Bridgend Licensing Sessions a provisional licence was granted to Mr. A. J. Solomon, Ninian-road, Cardiff, for a hydropathic hotel at Porthcawl, to be built on a site adjoining Lock's Common. The estimated cost of the building is £50,000. Mr. Sidney Williams, architect, Cardiff, produced the plans.

Sheerness.—The Council has approved plans submitted by Messrs. Twigg & Lifton of five houses proposed to be erected in Coronation-road.

Spain.—A market is to be constructed at Málaga. The estimated cost of the undertaking is 92,447 pesetas (about £3,700). Tenders by February 22. Improvements and extensions to a municipal building in the San Andres district of Barcelona. The estimated cost of the works is 87,357 pesetas (about £3,500). The contract includes the supply of masonry, woodwork, metal fittings, glass, paints, etc. Tenders by Feb. 20.

Stoke Newington.—The licensing justices have passed plans for various alterations at the Royal Oak, Green Lanes, Stoke Newington, N.

Stoke-on-Trent.—Taking off the present roof of the Burslem Old Town Hall and reconstructing same

Tonbridge.—At the annual Licensing Sessions for the Tonbridge Division Mr. A. H. Neve, Tonbridge, made an application on behalf of the Dartford Brewery Company for consent to carry out alterations to the Royal Oak Inn, Hayesden, Tonbridge. This was granted.

Tottenham.—A L.G.B. inquiry has been held into the application of the U.D.C. for sanction to borrow £8,643 for the purchase of land at Devonshire-hill, White Hart-lane, as a site for an isolation hospital.

Wigston Magna.—The U.D.C. has approved of the plans submitted by Messrs. J. D. Broughton & Sons for the extension of their factory in Bell-street.

Williton.—The Housing and Sanitary Committee has recommended the Council to approve plans of alterations and additions to Oare Manor House for Mr. Mountain, and for a new system of drainage at Elm Croft, Minehead.

York.—The Corporation has approved the following plans:—Adams Hydraulics, Ltd., temporary workshops, Peasholme-green; Mr. E. Relton, twenty-six houses, Carrington-avenue, Poppleton-road; Messrs. Myers & Burnell, alteration to office, Davy-gate; Mr. H. C. Harrewell, store and bathroom, Moorgate.

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ee also our list of Competitions, Contracts, etc., ge 132.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness.	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	8¾	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10	10	10	8½	7½	7½	7½
Leicester	10¼	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne.	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½*
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	10½	10	10	10½	9½	10	9¼	6	6½	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted.

GENERAL BUILDING NEWS

VICARAGE, CAMBERWELL.

St. Mark's Vicarage, Cobourg-road, Cam well, was formally opened last week. It been erected from the design of Messrs. Cree Heal, 5, Verulam-buildings, Gray's Inn, W the contractor being Mr. Charles R. Price 87, Bishopsgate, E.C.

SCHOOL, PORTHCAWL.

The new County Council school for inf and combined domestic science at Porth was opened recently. The school is situate a corner site adjoining New-road and Bl mouth-road, and comprises several classro It accommodates 156 scholars and a comb domestic science centre for twenty older pu with cloak-rooms, marching corridors, st medical inspection and teachers' room, al verandah in order to convert part into ope classes. Externally the building is faced red brick and Forest of Dean stone dressi and the roofs are covered with North W green slates. The buildings were erected the designs of Mr. D. Pugh-Jones, F. M.S.A., County Architect, Cardiff, Mr. Ric Jones, of Caerphilly, being the contrac Mr. W. J. Thomas, of Pyle, acted as cler works.

BANK ENLARGEMENT, TEMPLE BAR.

The contract for enlarging the Temple branch of the Capital and Counties B Ltd., has been placed with Mr. Charles Price, of 87, Bishopsgate, E.C. This recently completed the new branch of Capital and Counties Bank, Ltd., in G Portland-street, W.

TRADE NEWS.

Boyle's latest patent "Air-pump" ventila have been adopted for the Central Sch Port Talbot.

The Penmore Hospital, Derbyshire, is b supplied with Shorland's double-fronted w air ventilating patent Manchester Hos stoves by Messrs. E. H. Shorland & Brot Ltd., of Failsworth, Manchester.

The south wall of Killegney (Ireland) Chu which has for many years been affected dampness, has now been made watertight Pudloed cement.

Messrs. R. Gay & Co., Ltd., paint and en manufacturers, who have for many y supplied their manufactures to H.M. O of Works for the painting of the Royal pal and all the Government offices, have granted the Royal warrant by appoint to His Majesty the King. Their "Imp trable" was the last paint used on Bucking Palace previous to its being refronted in st

We have received from Messrs. Ashwe Nesbit, Ltd., engineers, Barkby-lane, Leice a very useful calendar for 1916, which sh an illustration of Glasgow University in se below which is attached a loose-leaf indicator printed in large plain figures.

Mr. J. Attwood, engineer and ironfoun Eclipsem Foundry, Stourbridge, has sent u illustrated price list of heating apparatus greenhouses, etc., boilers, pipes, fittings, tilating gear, etc. Those wanting free ad on any heating matter are invited to writ the above address.

BUILDING MATERIAL, FITTINGS, ETC., BARCELONA.

The *Gaceta* of January 21 notifies that ten will be received by the Municipal Authoriti Barcelona, within a period of thirty days that date, for the execution of improvem and extensions to a municipal building in San Andres district of Barcelona. The mated cost of the works is 87,357 pe (about £3,500). The contract includes supply of masonry, woodwork, metal fitt glass, paints, etc. Although the foreg two contracts will probably be awarde Spanish firms, nevertheless the carrying o the works may involve the purchase of materials outside Spain.

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Cheaper than neat cement. Use 3 & 1 with Pudlo.

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LAW REPORTS.

Patent Scaffolding: £200 Damages: Important Decision.

In the Shoreditch County Court, on January 27, before his Honour Judge Graham, K.C., a case of importance to architects and builders, having to do with an accident alleged to be due to patent scaffolding, was decided by a jury. The plaintiff in the action was George Albert Brewer, a bricklayer, of 45, Allenmouth-road, Hackney Wick, and he sought to recover £300 damages from Messrs. Crossley & Sons, builders, of Bromley, Kent, for personal injuries, under the Employers' Liability Act, 1880.

The case had been before the Court before, and on the ground that the defendants were not negligent—which had to be proved under the Act—non-suited the plaintiff. The matter was taken to the Divisional Court, where the case was sent back for a new trial.

Mr. Moyses, barrister, appeared for the plaintiff, and Mr. Shakespeare was counsel for the defence.

In opening the case counsel said it was uncertain whether the injuries to the plaintiff would be lifelong or not. He could be awarded three years of his wages, and, on the basis of £2 12s. a week, that would be £405 12s. The accident occurred on May 14, 1915, so that he had already lost £96 in wages. To him it seemed that the negligence was conspicuous and glaring. The Act laid down that there must be some shown defect in the ways, works, or machinery, but not necessarily that it belonged to the defendant. If he as an employer borrowed a portion of the plant, and it let the workman down, then the employer was liable; or even if the plant was superintended by someone else. The work in question was being carried out at 239, Hackney-road, where a hundred-year-old building was being pulled down. Instead of the usual scaffold with poles being used, an innovation was employed—*i.e.*, a patent scaffolding. Nine-inch "grapplers" with teeth were forced into the brickwork, and brackets fastened on these with "feet" resting against the wall. Boards were rested on these, on which the workmen stood. If fifteen to twenty courses of bricks were above the "grappler," then things would be safe, but in this case there were only three courses. Plaintiff had been on the work for four days when he was sent up on this scaffold with another man. Besides them, on it were a number of pails of cement and baskets of bricks. Plaintiff had never seen such a scaffolding before in his life. After an hour the scaffold collapsed, and plaintiff fell 20 ft. across an iron bar in the area, being very badly injured; his mate was also very much hurt. The injuries to the plaintiff were such that an operation would no doubt put him right, but it would be impossible to get him into hospital under present circumstances. What was most important was that the House of Lords had held that a negligent way of using a sound system might make the employer liable.

After a great deal of evidence on minor technical points had been given, Judge Graham proceeded to sum up to the jury. He said counsel had pointed out the importance of this case, but really the point in it was extremely simple. The sole point was whether the defendants had been negligent. There was no question of the scaffold falling, which might have been badly fitted, or the wall bad. Who was responsible for it falling was the thing. Defendant would be negligent if he did not take proper precautions. What precautions did he take? Defendant said he employed competent people to put it up; it appeared to be so, but was it enough? Then a man came every second or third day to inspect this scaffold, and was that enough? They had to remember that the work was going on, the bricks coming off, and, if he might call it such, the danger zone was approaching. Was it watched sufficiently?

The jury retired, and after about ten minutes returned into Court and gave a verdict for the plaintiff for £200 damages.

Judgment was entered accordingly, with costs.

The London Building Act.

At Bow-street Police Court on Tuesday, February 1, before Mr. A. Antwiss Hopkins, the magistrate's decision in the case of Doll *v.* Perkins was given.

The Magistrate said:—Upon consideration, the point in this case strikes me as very short and the solution seems to be reasonably clear. The question arises upon an appeal by the architect to the builders, brought under sect. 150 of the London Building Act, 1894, against a notice of objection served upon him by the District Surveyor under the same section. The facts are entirely agreed, and are as follows:—The appellant is concerned in the conversion of nine houses in Upper Bedford-place into a residential hotel. The back additions to those houses abut upon Woburn-mews, and upon the top of the third floor of those back additions the appellant seeks to erect a miniature rifle-range. That erection will project beyond the statutory limits laid down in sect. 41 of the statute, and will be intersected by the well-known diagonal line, drawn under that section, from a point above to the centre of Woburn-mews. It is against that projection and intersection that the District Surveyor objects. The answer of the appellant is that sect. 41 is not applicable. The appellant contends (I am aware that I paraphrase his contentions, but I state the effect of them) that this domestic building has outgrown its size and character as a domestic building, and has become a public building, and that the provisions of sect. 41 apply to a domestic building, that once a building, which would be otherwise a domestic building, can be brought within the definition (if it be a definition) of "public building" in sect. 5, sub-sect. 27, all the District Surveyor's powers over it as a domestic building have ceased to be effective. Having regard to the construction, supply of light and air, protection against fire, and the kindred responsibilities thrown by the statute upon the District Surveyor, one would not so restrict his powers unless one were driven to it. It is contended that I am driven to it by the definitions and interpretations found in sect. 5, sub-sects. 25, 26, and 27. Without pretending that the sub-sections do not raise some difficulties, I think I may say that the appellant's contention can only be supported, as it seems to me, by the narrowest construction of the words. His contention deals with each clause as a rigid definition, outside which nothing of the same class could exist. I think the more natural and liberal meaning is that all three clauses deal with three classes which often plainly overlap. I dismiss the appeal and allow ten guineas costs. I will state a case if I am asked.

Mr. Hugh Beazley: I appear now on behalf of my learned friend, Mr. Rayner Goddard, who argued the case, who cannot, unfortunately, be here now, and I am asked to raise one point on the question of costs, and that is this——

Mr. Cowper: On that might I say this? It was arranged, I believe, that this should be a friendly contest between the parties, and that neither party should ask for costs.

The Magistrate: If you please.

NEW COMPANIES.

The undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

John & William Bellhouse, Ltd. (142,581). Hulme Hall-lane, Miles Platting, Manchester. Registered December 31. To carry on business as timber merchants, saw mill proprietors, packing-case manufacturers, joiners, cabinet makers, importers and exporters, and to acquire the business of timber merchants carried on by J. & W. Bellhouse, Manchester, dealers in builders' materials, engineers, brick and tile manufacturers, warehousemen, etc.

H T. Bishop, Ltd. (142,714). Registered January 14. To acquire, take over, and carry on business now carried on at 51, Rosebery-road, Brixton-hill, as H. T. Bishop, to carry on business of builders, contractors, decorators, merchants, and dealers in sand, lime, stone, bricks, timber, oils, varnishes, and other building requisites. Nominal capital, £1,000 in 500 £1 Preference shares and 500 £1 Ordinary shares.

Valves, Ltd. (142,710). Registered January 13. To carry on business of general engineers, machine makers, tool, pattern, and steam pump makers, manufacturers of pulleys, bearings, wire drawers, dealers in all kinds of metals, engine builders, and repairers, etc. Nominal capital, £1,000 in 1,000 £1 shares.

William Gimson & Sons, Ltd. (142,
Registered January 13. To acquire,
over, and carry on business of timber merch
builders, and contractors now carried on by
Gimson and T. Y. Gimson at Leiceste
William Gimson & Sons, coach builders, m
car body builders, french polishers, make
portable buildings, and all domestic wood
and joinery, mechanical, gas, water, elect
and general engineers, etc. Nominal ca
£22,000 in 22,000 £1 shares.

William Lock & Son, Ltd. (142,
Registered January 14. To acquire, take
and carry on business of plumbers, pain
decorators, and heating and lighting engin
now carried on by W. Lock & Son at 1
Norfolk-street, and Bath-yard, Broad-st
King's Lynn, as William Lock & Son,
carry on business of builders and contrac
gas, electric light, water engineers, deale
bricks, tiles, drains, and other pipes, t
cotta, etc. Nominal capital, £2,500 in
£1 shares.

Brown & Naylor, Ltd., Batley
Works, Bradford-road, Batley Carr, Y
Registered January 8. To acquire, take
and carry on business of brass founders,
finishers, now carried on by Walker Brown
William Naylor at above address, and to
on business of ironfounders, mechanical
neers, agricultural implements and
machinery and tool makers, builders, pain
electrical, water, and gas engineers, hard
of all kinds. Nominal capital, £2,000 in
£1 Ordinary shares.

Kearton, Bailey, & Co., Ltd. (142,
Deanos Inn House, 265, Strand.
Registered January 12. To carry on bus
of ironfounders, mechanical engineers,
manufacturers of agricultural implements
other machinery and tools, builders, pain
electrical, water supply, gas engineers,
dealers in hardware of all kinds. Non
capital, £1,000 in 1,000 £1 Ordinary shar

T. W. Leach, Ltd. (142,707), Clyde W
Avenue-road, Clapton, N.E. Regis
January 13. To acquire, take over, and
on business of builder and decorator carri
by G. R. B. Leach at above address as T
Leach, and deal in stone, sand, lime, ti
bricks, hardware, and other builders' requi
pipe, tile, and terra-cotta makers, ge
engineers, etc. Nominal capital, £1,0
1,000 £1 shares.

David Ashton & Co., Ltd. (142,647),
Works, Neepsend, Sheffield. Regis
January 7. To carry on, develop, and
to account the business of David Ashton &
formerly carried on by Carl Davenport
T. C. Goode as Messrs. David Ashton
at above address, and to carry on busin
ironfounders, mechanical, hydraulic, pneu
marine, and locomotive engineers, iron
steel convertors, builders, painters, the w
and winning of minerals, etc. No
capital, £20,000 in 5,000 £1 Preference
and 15,000 £1 Ordinary shares.

S. Bullock & Co. (London), Ltd. (142
39, Victoria-street, London, S.W. Regi
January 10. To carry on business of
mechanical, electrical, gas, hydraulic, he
ventilating, and general engineers, ma
turers of and dealers in machinery and
of all kinds, brass founders, smiths, bu
painters, and implements and hardwa
all kinds. Nominal capital, £12,000 in
£1 Preference shares and 8,000 £1 De
shares.

H. E. Jackson, Ltd. (142,778). Regi
January 20. To carry on business of en
ing, now carried on at Churchgate, Lei
as H. E. Jackson & Co., and to carry on b
of ironfounders, mechanical, electrical
supply and gas engineers, contractors, bu
painters, wood turners, printers, c
merchants, etc. Nominal capital, £2,
2,500 £1 Ordinary shares.

J. W. Cullen, Ltd. (142,763). Reg
January 19. To acquire, take over, an
on business at Leicester, as J. H. Le
carpenters, decorators, shop-fitters, b
and contractors, painters, merchants,
in sand, stone, lime, and other b
requisites, warehousemen, removers,
keepers, etc. Nominal capital, £6,000 i
£1 preferential shares and 5,000 £1 O
shares.

RICES CURRENT OF MATERIALS.

Owing to the exceptional circumstances which vail at the present time, prices of materials uld be confirmed by inquiry.]

ince our last issue sheet lead, oils, and turps have been uced, white and red lead increased, and several other ces altered.—ED.

Our aim in this list is to give, as far as possible, the *rage* prices of materials, not necessarily the highest owest. Quality and quantity obviously affect prices fact which should be remembered by those who ke use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
t Stocks	2	0	0
ked Stocks for Facings	2	12	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
tons	1	10	0	BestBluePressed Staffordshire	4	14	0
t Fareham ed	3	12	0	Do. Bullnose	4	18	6
tRedPressed uabon Facing	5	5	0	Best Stourbridge Fire Bricks	4	14	0
ZED BRICKS—							
st White, vory, and alt Glazed tretchers	12	7	6	D'ble Str'tch'rs	17	17	6
ders	11	17	6	Double Headers	14	17	6
ins, Bullnose nd 4½ in. lats	15	17	6	One Side and two Ends	18	17	6
				Two Sides and one End	19	17	6
				Splays and Squints	17	7	6

Second Quality £1 per 1000 less than best.

	s.	d.	
mes Ballast	7	9	per yard, delivered.
mes and Pit Sand	8	0	„ „ „
t Washed Sand	9	0	„ „ „

Per ton, delivered.

	£	s.	d.		£	s.	d.
t Portland Cement	2	5	0	..	2	8	0

o. £2 1s. alongside in 80-ton lots.
ocrete 2s. 6d. per ton extra on above.
t Ground Blue Lias Lime.... 1 3 6 at rly. depôt.
E.—The cement or lime is exclusive of the ordinary charge for sacks.
y Stone Lime .... 17s. 0d. per yard delivered.
rbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
H STONE—delivered in railway trucks at estbourne Park, Paddington, G.W.R., or uth Lambeth, G.W.R., per ft. cube	1	7
do. delivered in Railway trucks at Nine lms, L. & S.W.R., per ft. cube	1	8¾
do. delivered on road waggons, Nine Elms epôt	1	9¼
TLAND STONE—		
rown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W., per ft. cube	2	5½
o. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½

hite Basebed, 2d. per ft. cube extra.

DOM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
aster in blocks	2	0	Red Corsehill in blocks	2	6
in blocks	1	7½	Closeburn Red Freestone	2	2
shill in blocks	2	4	Red Mansfield Freestone	2	9
ey Dale in ocks	2	5			

K STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
pled random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
. sawn two sides landings to sizes (under ft. super.)	2	5
rubbed two sides ditto, ditto	2	8
in. sawn two sides slabs (random sizes)	1	0½
to 2½ in. sawn one side slabs (random sizes)	0	8¼
n. to 2 in. ditto, ditto	0	6¾

D YORK—

Per Ft. Cube, Delivered at Railway Depôt.		
pled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
sawn two sides landing to sizes (under 40 ft. per.)	2	3
rubbed two sides ditto	2	7
sawn two sides slabs (random sizes)	1	0
self-faced random flags	0	5

TILES.

Per 1000 f.o.r. London.

	£	s.	d.
machine-made tiles or hand-made sand-ced tiles from either Broseley or affordshire district	2	12	6
mental ditto	2	15	0
and valley tiles (per dozen)	0	5	6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£	s.	d.
Blue Bangor slates, 20 by 10	11	16	0
quality „ „	11	10	0
„ „ 16 by 8	5	15	0
Blue Portmadoc, 20 by 10	11	13	6
quality „ „	11	3	6
„ „ 16 by 8	5	15	0

WOOD.

BUILDING REDWOOD.

Imported sizes.	Per standard.						
	£	s.	d.		£	s	d.
s: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	28	10	0	..	29	10	0
n. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	27	10	0	..	28	10	0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard.						
	£	s.	d.		£	s.	d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	23	10	0	..	24	10	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0				
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.			
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube.						
	8	10	0	..	—		
Seconds do. do.	8	0	0	..	—		
9 in. to 10 in. do.	7	0	0	..	—		
6 in. to 8 in. do.	6	10	0	..	—		
Stocks very limited.							
Sawn pitch pine logs (about 35 cu. ft. average)	Per load.						
	10	0	0	..	11	0	0
Do. 6 in. to 10 in.	8	0	0	..	9	0	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	10	0	..	7	0	0
	Per standard.						
Best Pitch Pine Deals	34	0	0	..	35	0	0
Rio do.	23	0	0	..	25	0	0
Under 2 in. thick	0	10	0	extra.			
JOINERS' WOOD.							
White Sea Frst Quality Red:							
4 in. by 11 in.	35	0	0	..	36	0	0
3 in. by 11 in., and 2 in. by 11 in.	34	0	0	..	35	0	0
4 in. by 9 in.	33	0	0	..	34	0	0
3 in. by 9 in., and 2½ in. by 9 in.	32	0	0	..	33	0	0
9 in. by 11 in. boards	1	0	0	more than deals.			
7 in. and 8 in. battens	24	0	0	..	25	0	0
7 in. and 8 in. boards	1	0	0	more than battens.			
Seconds quality	2	0	0	less than best.			
Third quality	£2 to £3			less than seconds.			
Archangel White Deals—							
Best 3 in. by 11 in.	28	0	0	..	29	0	0
3 in. by 9 in. and 10 in.	26	0	0	..	27	0	0
Seconds, do.	1	10	0	less than best.			
U.S. Battens	19	10	0	..	20	0	0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—							
	Per square actual.						
1¼ in. by 7 in. planed and shot	1	8	6	..	1	13	0
1¼ in. by 7 in. planed and matched	1	9	0	..	1	13	0
1 in. by 7 in. planed and shot	1	3	0	..	1	6	0
1 in. by 7 in. planed and matched	1	3	0	..	1	7	6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0	18	0	..	0	19	6
1 in. by 7 in. do.	1	3	0	..	1	5	6
⅝ in. by 7 in. do.	0	14	0	..	0	15	0
	Per standard.						
Columbian or Oregon Pine, best quality	35	0	0	..	40	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.			
Oddments	39	0	0	„			
Seconds, regular sizes	43	10	0	„			
Oddments	37	10	0	„			
Kauri Pine—Planks per ft. cube	0	7	6	..	—		
Oak Logs—							
Large, per ft. cube	0	6	0	..	0	6	6
Small „ „	0	5	0	..	0	5	6
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super, as inch	0	1	0	..	0	1	3
¾ in. do. do.	0	0	10	..	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0	1	0	..	0	1	4
Selected, Figury, per ft. super, as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	6	..	0	2	6
					upwards.		
Dry Walnut, American, per super, as inch	0	1	0	..	0	1	3
French, "Italian," Walnut	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton.						
	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	5	0	..	21	5	0
Plain Compound Girders, ordinary Sections	22	0	0	..	23	0	0
Plain Compound Stanchions	23	0	0	..	24	10	0
Angles, Trees, and Channels, ordinary sections	20	10	0	..	21	10	0
Flitch Plates	20	10	0	..	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	..	14	0	0

(Turning extra.)

METALS (*Continued*).

	Per ton, in London.						
IRON—	£	s.	d.		£	s.	d.
Common Bars	15	10	0	..	—		
Staffordshire Crown Bars, good merchant quality	15	10	0	..	16	10	0
Staffordshire "Marked Bars"	*17	0	0	..	17	10	0
Mild Steel Bars	16	10	0	..	17	0	0
Steel Bars, Ferro-Concrete quality, £17 10s. basis price.							
Hoop Iron, basis price	18	10	0	..	19	0	0
„ „ Galvanised	30	0	0	..	35	0	0
(* And upwards, according to size and gauge.)]							
Sheet Iron Black—							
Ordinary sizes to 20 g.	18	10	0	..	19	0	0
„ „ 24 g.	19	10	0	..	20	0	0
„ „ 26 g.	20	10	0	..	21	0	0
Sheet Iron, Galvanised flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29	0	0	..	—		
Ordinary sizes to 22 g. and 24 g.	29	10	0	..	—		
Ordinary sizes to 26 g.	32	0	0	..	—		
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	30	0	0	..	—		
„ „ 22 g. and 24 g.	30	10	0	..	—		
Ordinary sizes to 26 g.	33	10	0	..	—		
Galvanised Corrugated Sheets—							
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28	0	0	..	—		
Ordinary sizes, 22 g. & 24 g.	28	10	0	..	—		
Ordinary sizes, 26 g.	29	0	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19	15	0	..	—		
Best Soft Steel Sheets, 22 g. & 24 g.	20	0	0	..	—		
Best Soft Steel Sheets, 26 g.	21	15	0	..	—		
Cut Nails, 3 in. to 6 in.	18	10	0	..	19	0	0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£	s.	d.		
LEAD—Sheet, English, 4 lb. and up		37	0	0	..	—
Pipe in coils		37	10	0	..	—
Soil pipe		40	10	0	..	—
Compo pipe		40	10	0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.		
COPPER—						
Strong Sheet	per lb.	0	1	5	..	—
Thin „	„	0	1	6	..	—
Copper nails	„	0	1	5	..	—
Copper wire	„	0	1	5	..	—
BRASS—						
Strong Sheet	„	0	1	3	..	—
Thin	„	0	1	4	..	—
TIN—English Ingots	„	0	1	10	..	—
SOLDER—Plumbers'	„	0	0	10	..	—
Tinmen's	„	0	1	0	..	—
Blowpipe	„	0	1	2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	„ fourths	7½d.
26 oz. thirds	7d.	Fluted Sheet, 15 oz.	5¾d.
„ fourths	6½d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	9
„ „ „ in barrels	„	0	3	10
„ „ „ in drums	„	0	4	1
Boiled „ „ in barrels	„	0	4	0
„ „ „ in drums	„	0	4	4
Turpentine in barrels	„	0	4	1
„ in drums	„	0	4	4
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		46	0	0
Red Lead, Dry	per ton	44	0	0
Best Linseed Oil Putty	per cwt.	0	11	0
Stockholm Tar	per barrel	1	12	0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	57	10	0

VARNISHES, &c.

	Per gallon.		
	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, xx.; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

February 12.—**Aberdare.**—Schoolroom.—For the erection of a schoolroom, etc., at "Siloh" Welsh Congregational Chapel, Trecynon, Aberdare, for the Trustees. Plans, etc., of Mr. Thomas Roderick, architect, Ashbrook House, Aberdare.

February 14. — **Dewsbury.** — Extensions.—Extension of the engine-house at the Corporation Electricity Works, Bradford-road, Dewsbury. Plans, etc., of the Borough Surveyor, Town Hall, Dewsbury.

February 14.—**Edinburgh.** — Painting.—For the painter work in connection with the reconstruction of the tenement, No. 1, Milne's-court, Lawnmarket, for the Magistrates and Council. Specification, etc., of their Architect, Mr. James A. Williamson, A.R.I.B.A., Public Works Office.

February 14. — **Leeds.** — Repairs.—For the repairs to buildings and furniture for twelve months, from April 1, 1916, to March 31, 1917, for the E.C. Conditions of contract, etc., at the Architect's Section, Education Offices, Leeds.

February 21.—**Hayfield (Derbyshire).**—Reroofing.—For the reroofing of a building at the Wood Print Works, Hayfield, Derbyshire, for the Calico Printers' Association, Ltd., St. James's-buildings, Oxford-street, Manchester. Specification, etc., on application to the Engineering Department. Deposit, £1 1s.

February 21.—**Whitley Bay.**—Painting, etc. —For painting and decorating the interior of the Council Offices and caretaker's house, Council Buildings, Whitley Bay, for the Whitley and Monkseaton U.D.C. Specification, etc., of Mr. A. J. Rousell, A.M.Inst.C.E., the Council's Surveyor, Council Offices, Whitley Bay.

February 22. — **Belfast.** — Goods Shed.—Erection of a goods shed for the Belfast Harbour Commissioners. Drawings may be seen at the office of the Harbour Engineer, Mr. T. S. Gilbert, M.Inst.C.E., from whom copies of the specification, etc., may be obtained.

February 23.—**Hove.**—Alterations, etc.—For alterations and additions to the Electricity Works Davigdor-road. Form of tender, etc., of the Borough Surveyor, Town Hall, Hove.

February 23.—**Oakdale (Mon.).**—Institute.—For the erection of a workmen's institute at Oakdale Village for the Oakdale Institute Committee. Plans, etc., of Mr. A. F. Webb, M.S.A., architect and surveyor, Blackwood, Mon. Deposit, £2 2s.

March 4.—**Deganwy.**—Convalescent Home.—The Manchester and Salford Hospital Saturday and Convalescent Homes Fund invite tenders for the superstructure of proposed new convalescent home for men at Deganwy, North Wales. Specifications, etc., of the Achitect to the Fund, Mr. Herbert H. Brown, F.R.I.B.A., 20, Brazennose-street, Manchester. Deposit, £1 1s.

No Date.—**Leeds.**—Alterations.—Alterations of two houses in Vernon-road, Leeds, for the Yorkshire Village Library. Messrs. A. Marshall & Son, architects, Otley, and 53, Kirkstall-road, Leeds.

FURNITURE, MATERIALS, etc.

February 12.—**Penge.**—Cement and Lime.—Supply to the U.D.C. of cement and lime. Forms of tender, etc., of the Surveyor, Town Hall, Anerley, S.E.

February 14.—**Bethnal Green.**—Builders' Materials.—Supply to the B.C. of builders' materials for one, two, or three years, commencing April 1, 1916. Specifications, etc., of Mr. A. E. Darby, A.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Cambridge-road, Bethnal Green, E.

February 14. — **Birkenhead.** — Builders' Materials.—Supply to the Corporation Tramways of builders' materials. Particulars of Mr. G. P. Shallcross, A.M.Inst.E.E., Borough Electrical Engineer, Craven-street, Birkenhead, and Mr. Cyril Clarke, Tramways Manager, Laird-street, Birkenhead.

February 14. — **Canterbury.** — Builders' Materials.—Supply to the Roads and Survey Committee of builders' materials for a period of twelve months ending March 31, 1917. Specifications, etc., of Mr. Arthur C. Turley, A.M.Inst.C.E., City Surveyor, City Surveyor's Department, Municipal Offices, Canterbury.

February 14.—**Eccles.**—Builders' Materials.—Supply to the Corporation of builders' materials for the year ending March 31, 1917. Forms of tender, etc., of Mr. Thomas S. Picton, Borough Engineer and Surveyor, Eccles.

February 14.—**London.**—Builders' Materials. —Supply to the Finsbury B.C. of builders' materials from March 31 next. Forms of tender, etc., of the Borough Surveyor, Finsbury Town Hall, Rosebery-avenue, E.C.

February 14.—**London.**—Builders' Materials. —Supply to the Battersea B.C. of builders' materials from April 1 next. Forms of tender of Mr. W. Marcus Wilkins, Town Clerk, Town Hall, Battersea.

February 14.—**London.**—Builders' Materials. —Supply to the Council of the Borough of St. Marylebone of builders' materials for six months, commencing April 1, 1916. Tender forms, etc., of Mr. J. Paget Waddington, M.Inst.C.E., Borough Surveyor, at the Town Hall, Marylebone-lane, Oxford-street.

February 15.—**Bootle.**—Builders' Materials.—Supply to the Corporation of builders' materials and the execution of repairs for one year, commencing April 1, 1916. Forms of tender at the Borough Engineer's Office, Town Hall.

February 15. — **Portsmouth.** — Builders' Materials.—Supply to the Corporation Tramways Committee of builders' materials from April 1, 1916, to September 30, 1916. Specification, etc., of the Engineer, Mr. V. G. Lironi, M.Inst.M.E., A.M.Inst.E.E., Engineer's Offices, Vivash-road, Fratton, Portsmouth.

February 15. — **Southgate.** — Builders' Materials.—Supply to the U.D.C. of builders' materials for twelve months from April 1, 1916. Specifications, etc., of Mr. D. S. Sutherland, the Council's Surveyor, Council Offices, Palmers Green, N.

February 16.—**Belfast.**—Builders' Materials. —Supply to the Tramways and Electricity Committee of builders' materials. Forms of tender of the General Manager, Tramways Department, Napier-street, Sandy-row, Belfast. Deposit, 2s. 6d.

February 16.—**Bredbury and Romiley.**—Grit Setts, etc.—Supply to the Bredbury and Romiley U.D.C. of grit setts, curbs, concrete and Lancashire flags, granite macadam, pitch and creosote oil, limestone chippings, earthenware pipes, etc., and asphalting, for one year ending March 31, 1917. Forms of tender of the Surveyor, School Brow, Romiley.

February 16. — **Flaxton.**—Whinstone, etc.—Supply to the R.D.C. of whinstone, broken and unbroken, also for broken annealed and common slag. Forms of tender of Mr. Joseph Peters, Clerk to the above Council, 4, New-street, York, on receipt of a stamped addressed envelope.

February 16. — **Hammersmith.** — Builders' Materials.—Supply to the B.C. of builders' materials, etc., for the year ending March 31, 1917. Specifications, etc., of Mr. Leslie Gordon, Town Clerk, Town Hall, Hammersmith, W.

February 16. — **Huddersfield.** — Builders' Materials.—Supply to the Corporation of builders' materials for a period of twelve months ending March 31, 1917. Specification, etc., at the offices of Mr. K. F. Campbell, M.Inst.C.E., M.I.E.E., Borough Engineer and Surveyor, 1, Peel-street.

February 16.—**Ilford.**—Builders' Materials.—Supply to the U.D.C. of builders' materials for the twelve months ending March 31, 1917. Forms of tender, etc., of Mr. H. Shaw, M.Inst.C.E., Engineer and Surveyor, Town Hall, Ilford. Deposit, 5s.

February 16.—**London.**—Builders' Material —Supply to the Fulham B.C. of builder materials for the twelve months endin March 31, 1917. Tender forms, etc., of Mr. Percy Shuter, Town Clerk, Town Hall, Fulha S.W.

February 16. — **Rawtenstall.** — Builder Materials.—Supply to the Corporation builders' materials. Forms of tender of t Borough Surveyor, Town Hall, Rawtenstall.

February 17. — **Darlington.** — Builder Materials. — Supply to the Corporation builders' materials for the six months endi September 30, 1916. Form of tender, etc., fro the Borough Surveyor and Water Wor Engineer, Town Hall, Darlington.

February 17.—**Hereford.**—Builders' Materia —For the supply of builders' materials for t twelve months ending March 25, 1917. Gene conditions, etc., at the office of the City Su veyor.

February 18.—**Cork.**—Builders' Materials. Supply to the B.C. of builders' materia Specification, etc., at the City Engineer's Offi City Hall.

February 18. — **Merton and Morden.** Builders' Materials.—Supply to the U.D.C., the year ending March 31, 1917, of builde materials. Forms of tender of Mr. C. Mountfield, Clerk to the Council, Distr Council Offices, Kingston-road, Merton.

February 18.—**Sowerby Bridge.**—Ceme etc.—Supply to the U.D.C. during the ye ending March 31, 1917, of Portland ceme pitch, creosote oil, Lancashire setts and ke Yorkshire setts, flags, and kerb. Form of te der, etc., of Mr. James Eastwood, A.M.Inst.C. Engineer and Surveyor, Sowerby Bridge.

February 19.—**Bath.**—Builders' Materials. Supply to the City Council of materials, et for one year, commencing April 1, 1916. Ten forms on payment of 1s. at the City Surveyo Office, Guildhall, Bath.

February 19.—**Hemel Hempsted.**—Builde Materials.—Supply to the B.C. of builde materials for the year ending March 31, 19 Tender forms of the Borough Surveyor, To Hall, Hemel Hempsted.

February 19.—**Stafford.**—Building Materia —Supply to the Corporation of buildi materials, the contracts to commence on Apri next and to terminate on March 31, 1917. For of tender of Mr. W. Plant, A.M.Inst.C. Borough Engineer, Borough Hall, Staffo Deposit, 5s.

February 19.—**Swansea.**—Builders' Materia —Supply to the B.C. of builders' materi during the year to end March 31, 1917. For of tender, etc., of the Borough Surveyor, Gui hall, Swansea.

February 21. — **Edinburgh.** — Furnitur Supply to the Edinburgh Association for Provision of Hostels for Women Students furnishings and fixtures at the Stude Hostels, Craigmillar Park, Edinbur Schedules of quantities, etc., of the Asso tion's Architect, Mr. A. K. Robertson, Hanover-street, Edinburgh.

February 21.—**Whitley and Monkseato** Builders' Materials.—Supply to the U.D.C. builders' materials, etc., for twelve mon from April 1, 1916, to March 31, 1917. Speci tions, etc., from Mr. A. J. Rousell, A.M.Inst.C Surveyor to the Council, Council Buildi Whitley Bay.

February 22.—**Sale.**—Flags, Kerbs, et Supply to the U.D.C. of flags (including crete), kerbs, grit setts, macadam, granite c pings, lime and limestone chippings, eart ware pipes, junctions, bends, and gullies, n hole covers and other ironwork, blue bri disinfectants, prepared tar for tar spray creosote oil, and pitch. Forms of tender, of Mr. W. Holt, A.M.Inst.C.E., Engineer Surveyor, Town Hall, Sale.

February 24. — **Islington, N.** — Build Materials.—Supply to the B.C. of buil materials for one year from April 1, Forms of tender, etc., can be obtained on a cation at the Town Hall, Upper-street, N.

[Those with an asterisk (*) are advertised in this issue]

FURNITURE, etc.—*continued.*

date given at the commencement of each raph is the latest date when the tender, or ames of those willing to submit tenders, e sent in.

ruary 26. — **South Shields.** — Builders' ials.—Supply to the Corporation of ers' materials for the year ending March 31, Specifications, etc., of Mr. Leslie Rose- M.Inst.C.E., Borough Engineer, Munici- uildings, South Shields.

ruary 28. — **Mansfield.** — Builders' ials.—Supply to the Corporation of ers' materials for a period of twelve months March 31, 1917. Specifications, etc., of Vaude Thompson, A.M.Inst.C.E., Borough eer and Surveyor, Market-street, Mansfield.

ruary 28.—**Southend-on-Sea.**—Builders' ials.—Supply to the Corporation of ers' materials during a period of twelve s from April 1, 1916. Forms of tender of Ernest J. Elford, M.Inst.C.E., Borough eer, Southend-on-Sea.

ch 4.—**Blackpool.**—Builders' Materials.— to the Highway Department of builders' ials for the year ending March 31, 1917. of tender of Mr. John S. Brodie, Borough eer and Surveyor, Municipal Offices, Town Blackpool.

arch 7.—**London.**—Materials, etc.—The politan Water Board invite tenders for of various stores and execution of work period of one year.

GINEERING, IRON, AND STEEL.

ruary 14.—**Southampton.**—Heating In- tion.—For supplying and erecting a heat- nstallation, by low-pressure hot water, ing the provision of radiators, boiler, etc., Eastern District School, for the Corpora- Plan, etc., at the Borough Engineer's

ruary 16.—**London.**—Metals.—Supply to ast Indian Railway Company of metals. C. W. Young, Secretary, Nicholas-lane, n, E.C.

ruary 23.—**London.**—Steel Tyres.—Supply South Indian Railway Company, Ltd., of tyres (900), for carriages and waggons. Robert White, M.Inst.C.E., Consulting eer to the Company, 3, Victoria-street,

ruary 29. — **London.** — Driving Wheel , etc.—Supply to the London County il of forge steel driving wheel tyres and steel trailing wheel tyres. Form of , etc., from the Chief Officer, London y Council Tramways, 62, Finsbury-pave- E.C.

OAD, SANITARY, AND WATER WORKS.

ruary 14.—**Dunstable.**—Slag, etc.—Supply Corporation of slag and tarred slag for velve months commencing March 25, 1916. s of tender from the Borough Surveyor. V. F. Wilkins, Town Hall, Dunstable.

ruary 16.—**Gosforth.**—Whinstone, etc.— to the U.D.C. of broken and dressed tone, granite kerb, cement, artificial flags, ry ironwork, sanitary pipes, for a period of twelve months. Particulars of the Engineer and Surveyor, Mr. Geo. Nelson, A.M.Inst.C.E., Council-chambers, Gosforth.

February 16.—**Reigate.** — Tar-washing.—For tar-washing about 112,000 yds. super. of roads, for the T.C. Forms of tender, etc., of Mr. Fred T. Clayton, Borough Surveyor, Municipal Buildings, Reigate.

February 16.—**Reigate.**—Tarvia, etc.—Supply to the T.C. of tarvia, in barrels, at per gallon; dehydrated tar, at per gallon; grit, and granite chippings. Forms of tender, etc., of Mr. Fred. T. Clayton, Borough Surveyor, Municipal Buildings, Reigate.

February 16. — **Shrewsbury.** — Broken Macadam, etc.—Supply to the Corporation of the undermentioned materials for the year ending March 31, 1917, viz., broken macadam, tarred granite macadam, tarred slag, broken slag, distilled tar, crossing blocks, Yorkshire or Lancashire kerbs, flags, and channels, concrete flags. Specifications, etc., of Mr. A. W. Ward, A.M.Inst.C.E., Borough Surveyor, The Square, Shrewsbury.

February 16.—**Swindon.**—Deal Blocks.—Supply to the Corporation of about 25,000 creosoted red deal blocks for street paving works. Specification, etc., of Mr. H. J. Hamp, Borough Surveyor, Town Hall, Swindon.

February 17. — **Claypole.** — Granite, etc.—Supply to the R.D.C. of about 1,700 tons of granite, 1,070 tons of slag, and 120 tons of footpath gravel. Particulars of Mr. P. A. Watford, Swinderby, Lincoln.

February 17.—**Thakeham.** — Basalt, etc.—Supply to the R.D.C. of broken basalt or granite, unbroken flints, and refined tar, for the year ending March 31, 1917. Forms of tender from Mr. Wm. Forrester, Surveyor, Storrington, Pulborough, Sussex.

February 17.—**Wetherby.**—Tar.—Supply to the R.D.C. of refined tar. Mr. E. H. Coates, Clerk to the Council, Wetherby.

February 17. — **Wetherby.** — Roadstone. —Supply to the R.D.C. of broken roadstone, tar macadam, and cob-limestone, for the year ending March 31, 1917, in quantities required by the Surveyor. Specifications, etc., of the Surveyor to the Council, Mr. A. G. Kilner, Council Offices, Wetherby.

February 18.—**Newark.**—Urinal.—For constructing a urinal in the Saracen's Head Yard for the Corporation. Quantities, etc., from the Borough Engineer, Town Hall.

February 19.—**Ballymena.**—Baths, etc.—For supplying and fitting up two baths, three lavatories, and two water-closets at the Fever Hospital, Ballymena, for the B.G. Specifications of the Engineer, Mr. Francis D. Brown, 93, Ann-street, Belfast.

February 19.—**Cupar.**—Whinstone Metal.—For quarrying, carting, and breaking Whinstone metal for the different divisions of highways within the district of Cupar, for the C.C. of Fifeshire. Mr. Thomas Aitken, M.Inst.C.E., Surveyor's Office, 12, Crossgate, Cupar.

February 21.—**Epsom.**—Broken Granite, etc. —Supply to the R.D.C. of the following materials during the year ending March 31, 1917:—Broken granite macadam, granite chipping, slag tar-macadam, land picked flints, dug flints, fine gravel, sand, hoggin, cement and stoneware pipes. Also for the supply of team labour for carting materials and for day work. Forms of tender, etc., of Mr. T. E. Ware, Surveyor to the Council, Waterloo-road, Epsom.

February 21.—**London.**—Road Materials.—Supply to the Commissioners of his Majesty's Works and Public Buildings of road materials during a period of one year from April 1, 1916. Forms of tender, etc., of the Secretary, H.M. Office of Works, Storey's-gate, London, S.W.

February 23.—**Shrewsbury.**—Cast-iron Pipes. —For the supply and delivery of cast-iron pipes and specials as required during year ending March 31, 1917. Specification, etc., of Mr. W. Arnold Hewitt, Manager and Mechanical Engineer, Waterworks Office, Shrewsbury.

February 24.—**East Riding.**—Stone.—Supply to the Highways and Bridges Committee of the East Riding C.C. of about 8,000 tons of stone, for macadamising the main roads. Forms of tender, etc., of the County Surveyor, Beverley.

February 24. — **Pontefract.** — Materials.—Supply to the R.D.C. of materials for the repair of the highways for the twelve months ending March 31, 1917. Forms of tender of Mr. Geo. W. Hobman, Clerk to the Council, Union Offices, Pontefract.

February 26.—**South Shields.**—Laying in situ Concrete.—In situ concrete for footways and back streets in the borough, for twelve months, for the Corporation. Specification, etc., of Mr. Leslie Roseveare, M.Inst.C.E., Borough Engineer and Surveyor, Municipal Buildings, South Shields.

February 28.—**Rowley Regis.**—Sewer.—Laying and constructing an extension of the sewer in the Brades-road, Tividale, for the U.D.C. Specification, etc., deposited for inspection at the Council House, Old Hill, Staffordshire.

Public Appointments.

* February 17.—Assistant Woodwork Instructors.—The Chester Education Committee invite application for above posts.

* No Date. — **London.** — Applications are invited for the position of building and drainage inspector. Salary, £3 3s.

Auction Sales.

* February 16. — **Clapham-road.** — Messrs. Veryard & Yates will sell by auction, on the premises, new and secondhand timber and building materials.

* February 17.—**Sloane-square.**—Mr. H. W. Smith will sell by auction, on the premises, the stock and plant of a builder, decorator, and sanitary engineer.

* February 23. — **Bloomsbury.**—Messrs. E. Fox, Burnett, & Baddeley will sell by auction, at the Mart, a freehold building site.

* February 23.—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

[Those with an asterisk (*) are advertised in this issue.]

TO CORRESPONDENTS.

E.—All communications with respect to literary rtistic matters should be addressed to "THE OR" (and not to any person by name); those g to advertisements and other exclusively business s should be addressed to THE BUILDER LTD., t to the Editor.

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—Illustrations of the First Premiated Design in portant architectural competition will always be ed for publication by the Editor, whether they een formally asked for or not.

PATENTS:

APPLICATIONS PUBLISHED.*

23,291 of 1914.—Gordon Don Harris: Process of and apparatus for drying by hot air circulation.

23,411 of 1914.—John Johnson Owen: Seasoning timber.

23,924 of 1914.—George Prentice: Scrapers for removing distemper or the like from ceilings and other surface.

351 of 1915.—Louis Pelnard-Considère: Bridges

385 of 1915.—William James Douglass: Ships' casing, bulkhead, fireproof and other door and skylight frames, and the like.

555 of 1915.—William Raleigh Kerr Gandell and Ralph Allan Janes: Method of joining woodwork.

623 of 1915.—William Bremner: Door fastener.

696 of 1915.—Henry Rottenburg: Plumb-line indicator.

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BARKING.—For extensions at the electricity works, for the Urban District Council:—

S. E. Moss, Southend*	£1,200

CHURWELL (Yorks).—For erection of three-story warehouse, engine-house, engine beds, gas-production plant, etc., at Millshaw Leather Works, Churwell, for Messrs. W. L. Ingle, Ltd. Mr. T. A. Buttery, architect and surveyor, 1, Basinghall-square, Leeds:—

Mason: H. Spensly, High-street, Morley	£1,020	14	0
Joiners: Lazenby Bros., Headingley, Leeds	545	15	1
Plumber: A. W. Clegg, Queen-street, Morley	134	19	10
Plasterers: J. Predale & Son, Bradford-road, Birstall	66	14	2½
Concretors: J. Predale & Son, Bradford-road, Birstall	870	17	10
Slaters: J. Atkinson & Son, Whitehall-road, Leeds	120	6	0
Patent Glazier: W. H. Heywood, Bayhall Works, Huddersfield	36	19	1
Ironfounders: Roberts & Co., Cutler Heights, Bradford	361	10	0

[Only engine-house and plant-house is being carried out at present.]

DUBLIN.—For the erection of dwellings and the execution of other work on the Ormond Market area, for the Dublin Corporation :—

H. & J. Martin, Dublin*	£20,076 12

FARNBOROUGH (Hants).—For erection of a pair of cottages (first pair) on the Knellwood Estate, Farnborough. Mr. A. H. Dungay, M.S.A., architect, Alpha-chambers, Farnborough :—

Jones Bros.	£750	0
W. Wells King	638	0
T. G. Smith	585	0
Hoskins & Jacobs	580	0
W. Bundey	575	0
E. Ewins, Farnborough*	563	10

FARNBOROUGH (Hants).—For additions and alterations to Fairfax House, Farnborough. Mr. A. H. Dungay, M.S.A., architect, Alpha-chambers, Farnborough :—

E. Ewins, Farnborough*	£294

FARNBOROUGH (Hants).—For the erection of a shop and dwelling-house in Camp-road, Farnborough. Mr. A. H. Dungay, M.S.A., architect, Alpha-chambers, Farnborough :—

Crosby & Co.	£1,000
Cæsar Bros.	969
W. Bundey	889
W. Wells King	£840
E. Ewins, Farnborough* (after revision)	793

GODALMING.—New borehole at the waterworks, Borough-road, for the Corporation :—

Perkins-Macintosh Petroleum Tool and Boring Co., Ltd., St. Albans*	£779

LONDON.—Accepted by the Metropolitan Water Board for the supply of the undermentioned stores and materials :—

Battersea (Central Buildings).

Granite setts, A. & F. Manuelle, £1,540 (approx.).
Best hard picked stock bricks, J. Knowles & Co. (London), Ltd., £76 1s.
Steel angle, beam, and channel, H. Young & Co., Ltd., £47.
Cable (red and black), Callender's Cable and Construction Company, Ltd., £34 10s. 8d.
Mild steel angles, Dorman, Long, & Co., Ltd., £25 15s.
Steel work for emergency gear shelter and pattern stores, A. D. Dawnay & Sons, Ltd., £791 2s. 3d.
Centrifugal rotary pump, New Roto Plunge Pump Company, Ltd., £39.
Twist drill grinders, Buck & Hickman, Ltd., £35 19s. 6d.

Battersea (Renewal of Stock).

Screw-down stopcocks, Woodhouse & Co., Ltd., £286 4s.
White jute piping, Hoare, Marr, & Co., £54.

King George's Reservoir Works.

Steel piles, 15 in. by 5 in. by 18 ft. long, and corner pile, British Steel Piling Company, £411 12s.

LONDON.—For the fixing of new steel-wire ropes for the lifts at Greenwich Tunnel, for the London County Council :—

Waygood-Otis, Ltd.	£51
Easton Lift Co., Ltd., Southwark, S.E.*	35

LONDON.—For making up the footpaths temporarily on Section C, White Hart-lane Estate, for the London County Council :—

W. E. Bloomfield*	£55

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LONDON.—For the provision of foundry plant for the central car depôt of the London County Council :—

Two Double-head Grinding Machines.

J. W. Jackman & Co., Ltd.	£130	0	0
Murphy, Stedman, & Co., Ltd.	116	0	0
Selson Engineering Co.§	96	0	0
B. R. Rowland & Co., Ltd., Redish, near Stockport*	90	0	0
Alldays and Onions Pneumatic Engineering Co., Ltd.‡	82	10	0

Coke-breaking Machine.

G. Green & Co.	£165	0	0
Alldays and Onions Pneumatic Engineering Co., Ltd.	145	0	0
Murphy, Stedman, & Co., Ltd.	143	15	0
T. & R. Lees, Hollinwood, near Oldham*	73	0	0

Shafting, Bearings, etc.

Murphy, Stedman & Co., Ltd.	£43	14	6
Alldays and Onions Pneumatic Engineering Co., Ltd., Birmingham*	39	12	0

‡ Not to specification. § Less 2½ per cent. discount.

LONDON.—Accepted by the London County Council for the execution of the following works :—

Painting Work.

Avery-hill—W. Pollock	£31	0	0
Bethnal Green Gardens — G. Barker	34	18	6
Boundary-street Garden—W. Hennessy & Son	27	0	0
Hainault Forest—J. S. Hammond, Sons, & Co.	29	8	0
Hainault Forest—F. Harman & Co.	29	15	0
Ladywell Recreation Ground—J. H. Beeley	29	17	6
Marble-hill—W. Neighbour & Sons	22	18	6
Mountsfield Park—J. H. Beeley	27	15	0
Ravenscourt Park — A. and F. Polden	42	0	0
Shandy-street Recreation Ground —W. Hennessy & Son	20	0	0
St. James's Gardens — Press, Robinson, & Co.	22	5	0
Tooting Common—Triggs & Co.	30	10	0
Walworth Recreation Ground—Triggs & Co.	23	0	0

Painting and Tarring Work.

Maryon Park—J. Scott Fenn	£67	15	0

Repairs to Fairseat House.

Waterlow Park—J. Marsland & Sons	£180	0	0

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Waterlow Park—Triggs & Co.	£36	11	2

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LONDON.—For the provision of lavatory ac modation for women conductors at Balham Shed, for the London County Council :—

Swain & Selley	£175	13
H. Frost	152	10
Chappell Bros.	118	0
J. Gower & Son, Trinity-road, S.W.*	117	14

MORLEY.—For erection of rag shaker plac Parkfield Mills, Morley, for Messrs. John Bru & Son, Ltd. Mr. T. A. Buttery, architect and veyor, 1, Basinghall-square, Leeds, and Qu street, Morley :—

Masons and Joiners: J. W. Binks & Son, Clough-street, Morley*	£466
Slater: J. Kellett, Fountain-street, Morley*	27
Plumber: A. W. Clegg, Queen-street, Morley*	25

NAAS.—For relaying water main over B nanny Hill, for the Naas Rural District Cou Mr. F. Bergen, Borough Engineer, Kildare :—

P. Blake, 3, North Great Georges-street, Dublin	£120 14

THRUSSINGTON (Leicestershire).—For the tial demolition of the existing two brick arches rebuilding of same in ferro-concrete, and for road-making incidental thereto, at Thrussi Bridge, for the Leicestershire County Council. S. Perkins Pick, County Engineer, 6, Millst lane, Leicester :—

Johnson & Langley	£484	0	
A. E. Palmer	472	0	
J. J. Shardlow	470	0	
Chitham & Co.	464	16	1
J. Chapman & Sons	458	0	
J. Ellis & Sons	453	5	
W. Moss & Sons, Ltd., Loughborough*	435	0	

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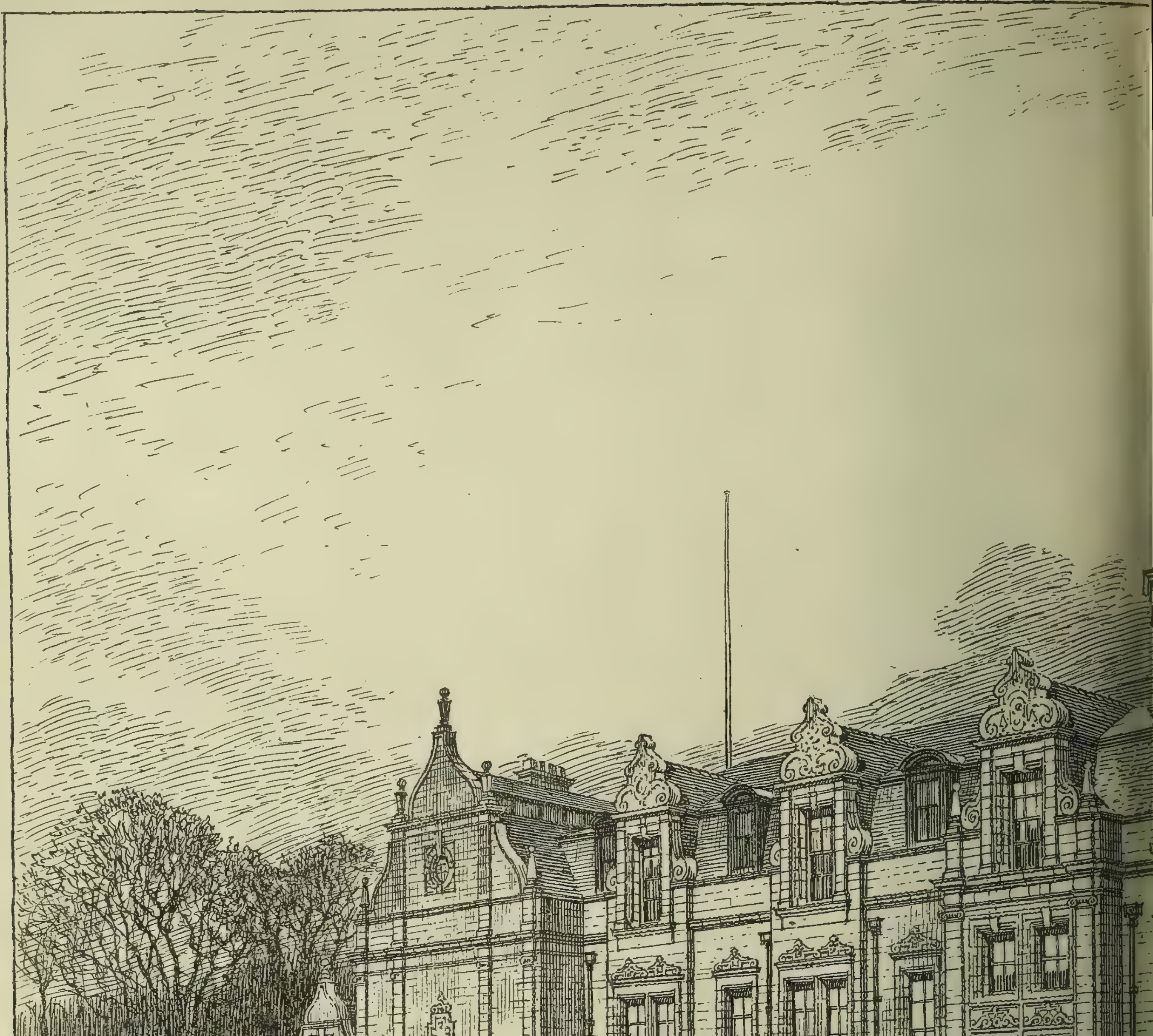
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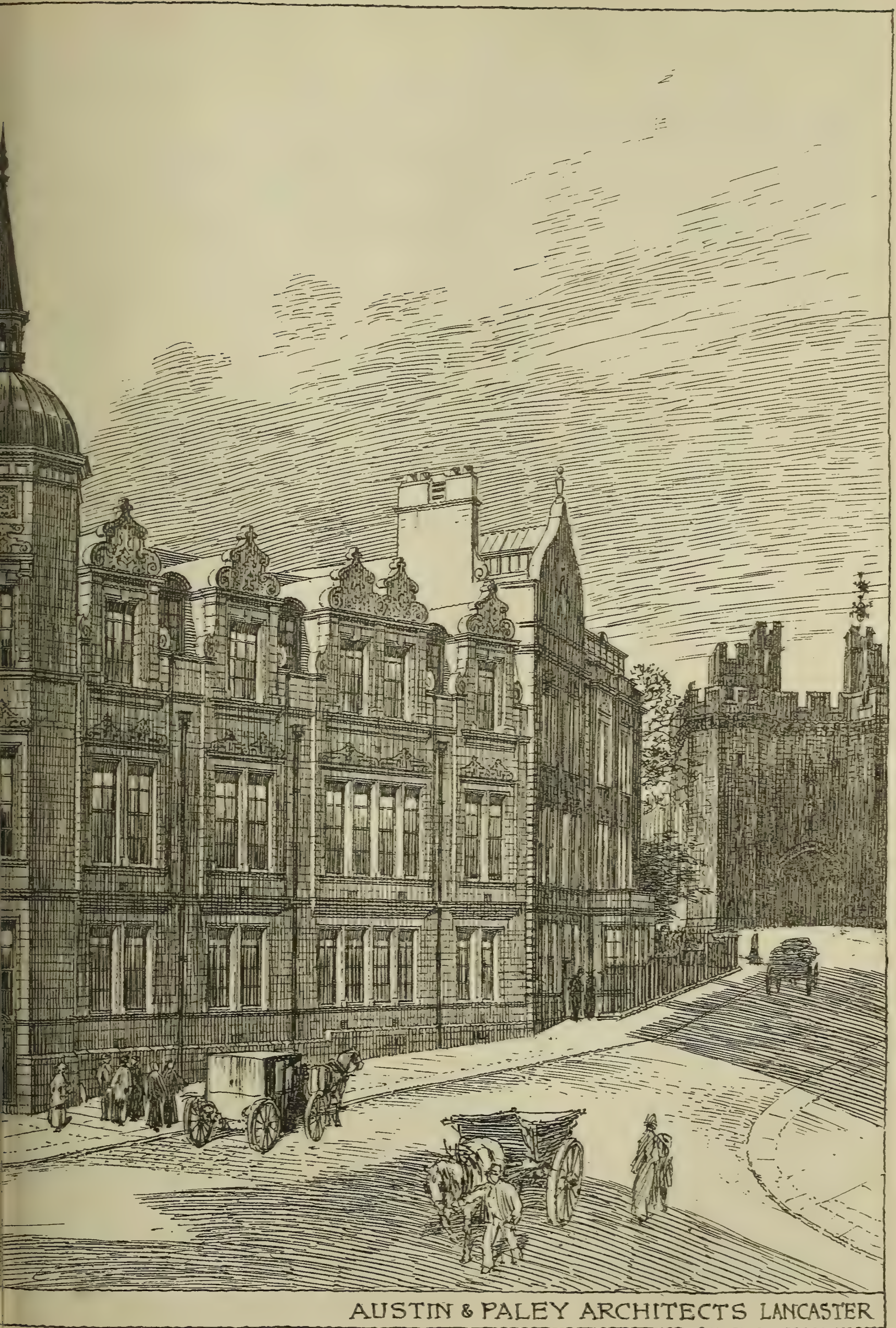
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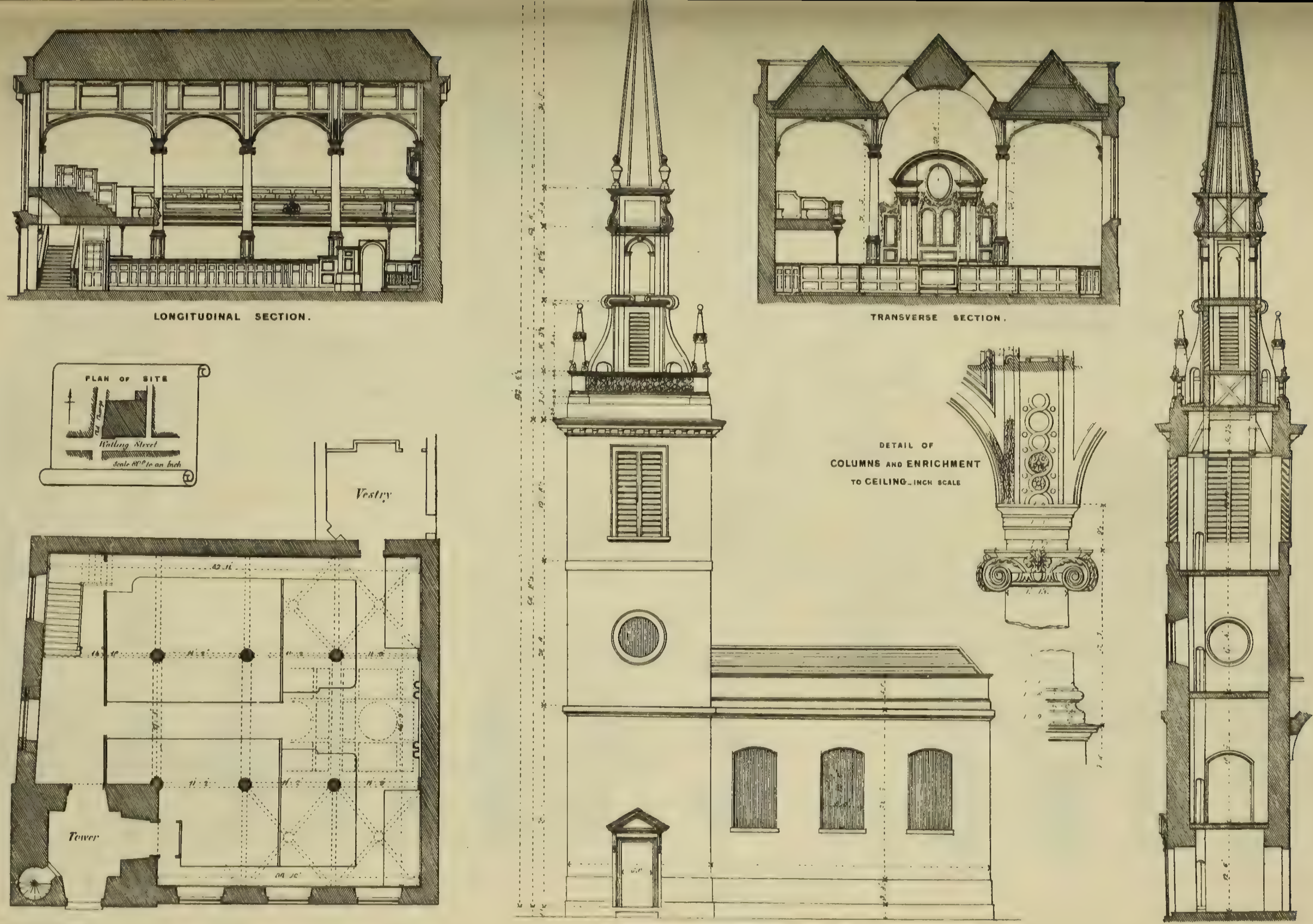

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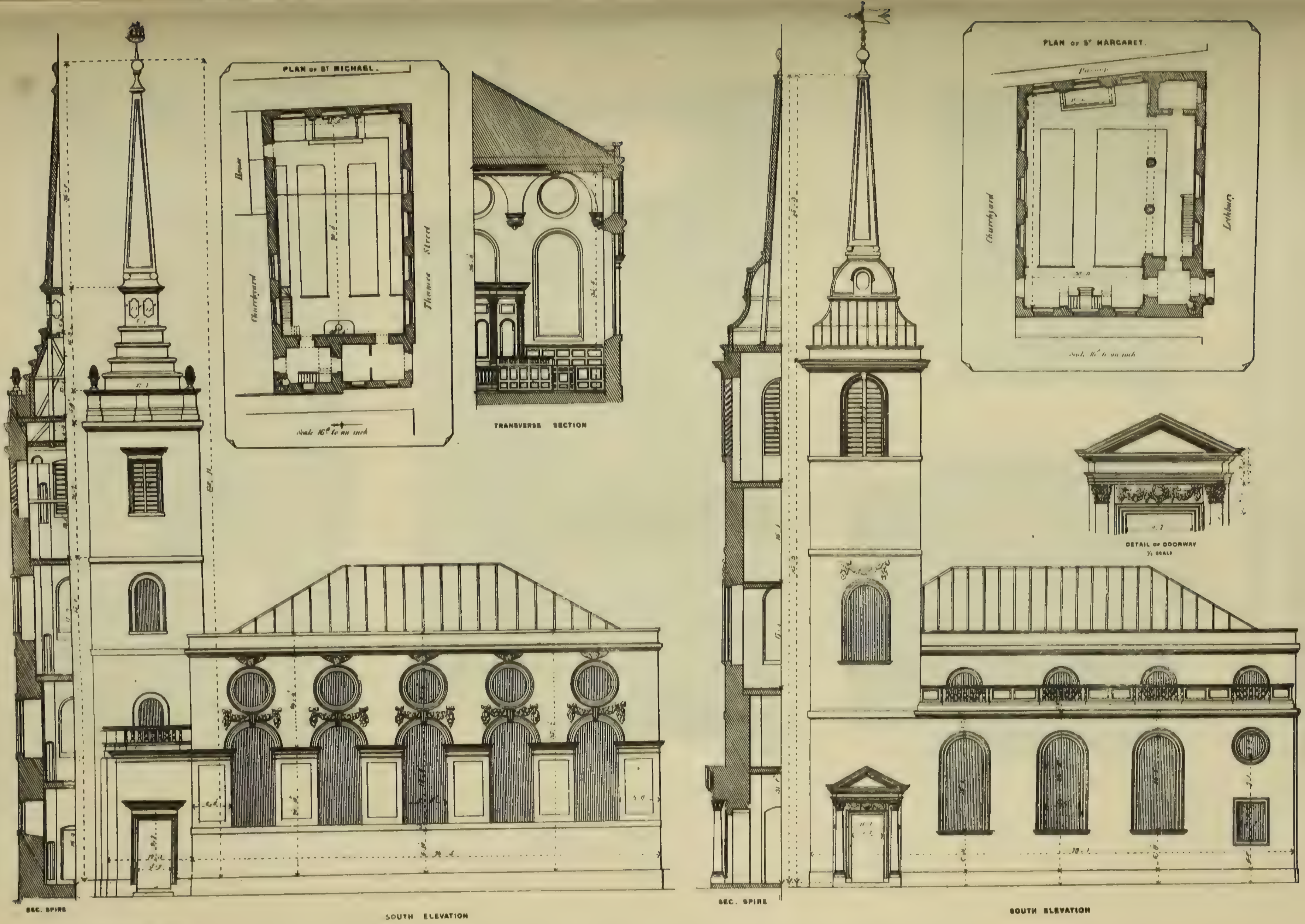

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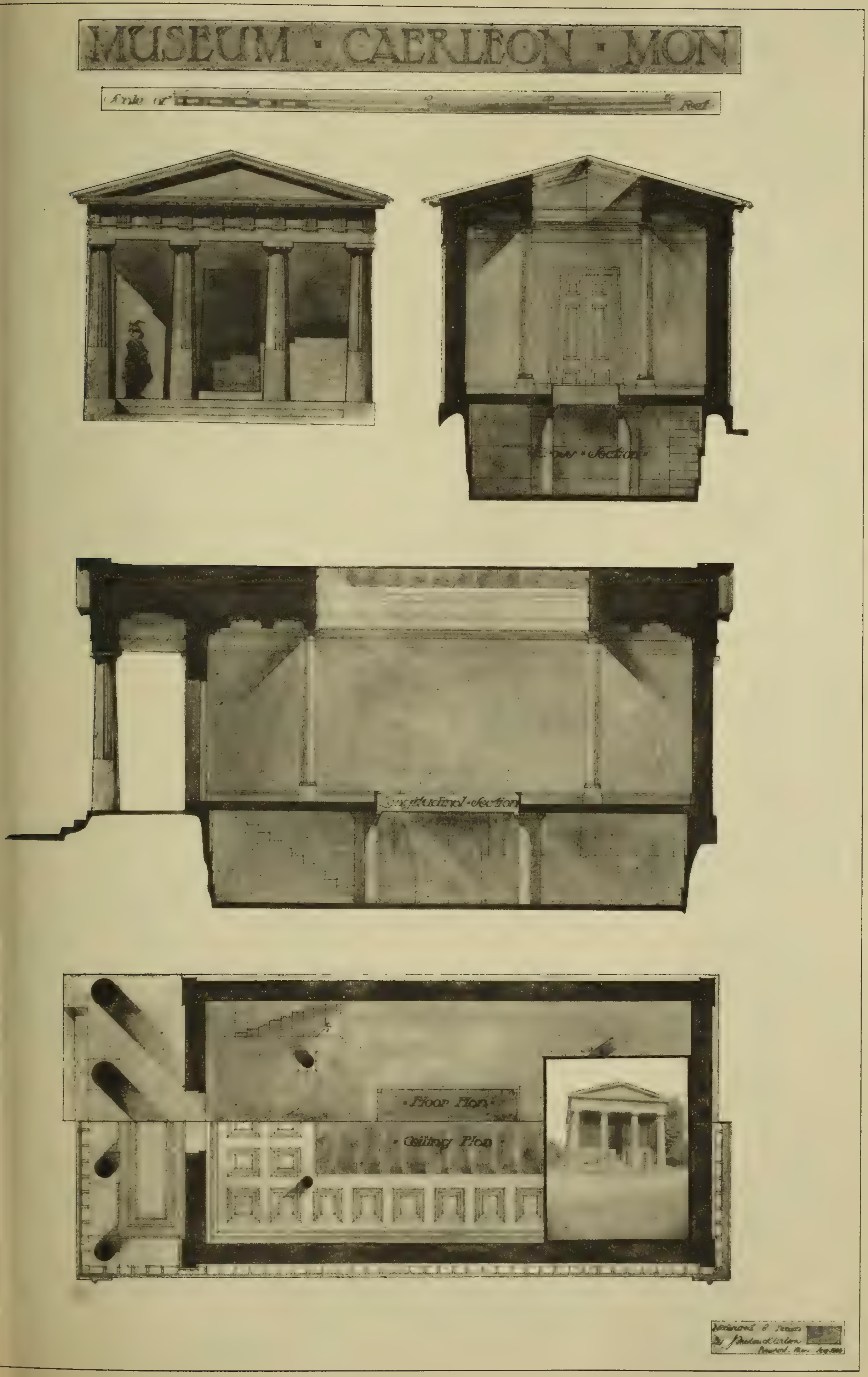
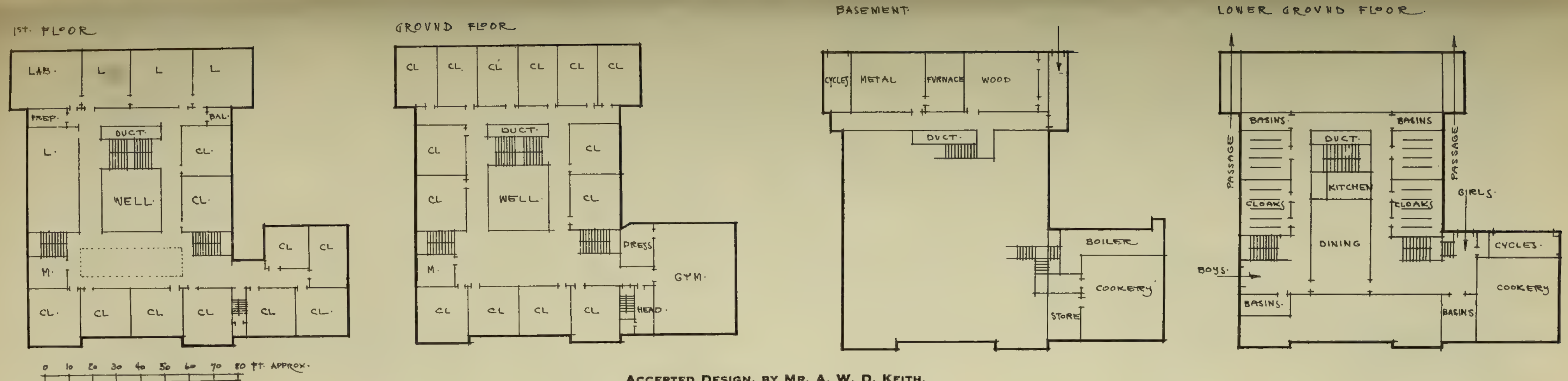
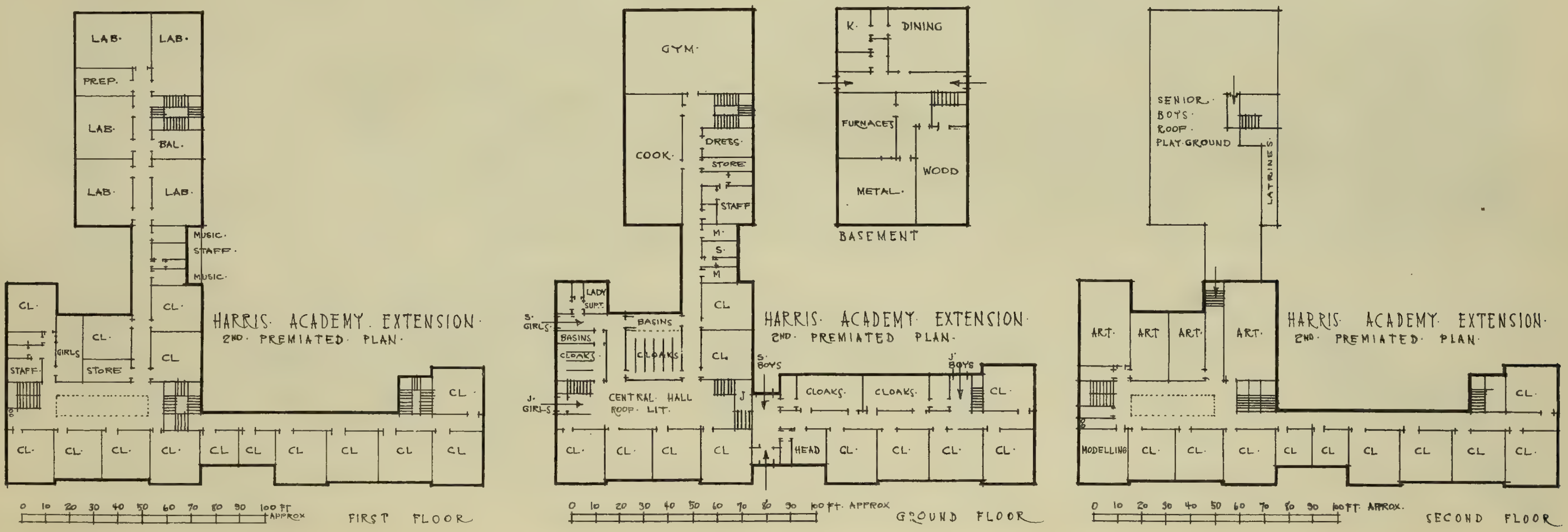
WREN'S CHURCHES: ST. MICHAEL, QUEENHITHE, AND ST. MARGARET, LOTHBURY.



MUSEUM CAERLEON, MON.—MEASURED AND DRAWN BY MR. J. FREDERICK WILSON.

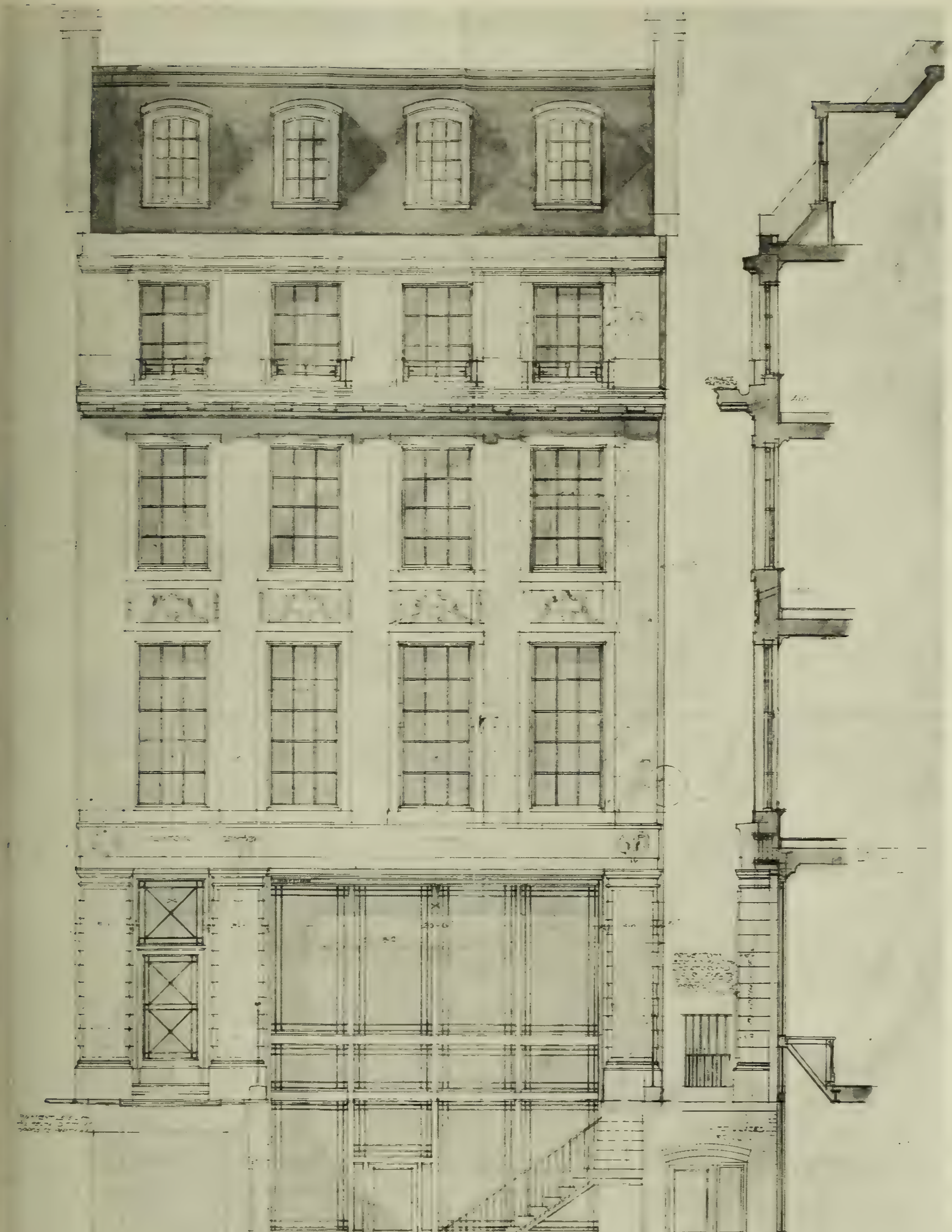


Accepted Design, by Mr. A. W. D. Keith.

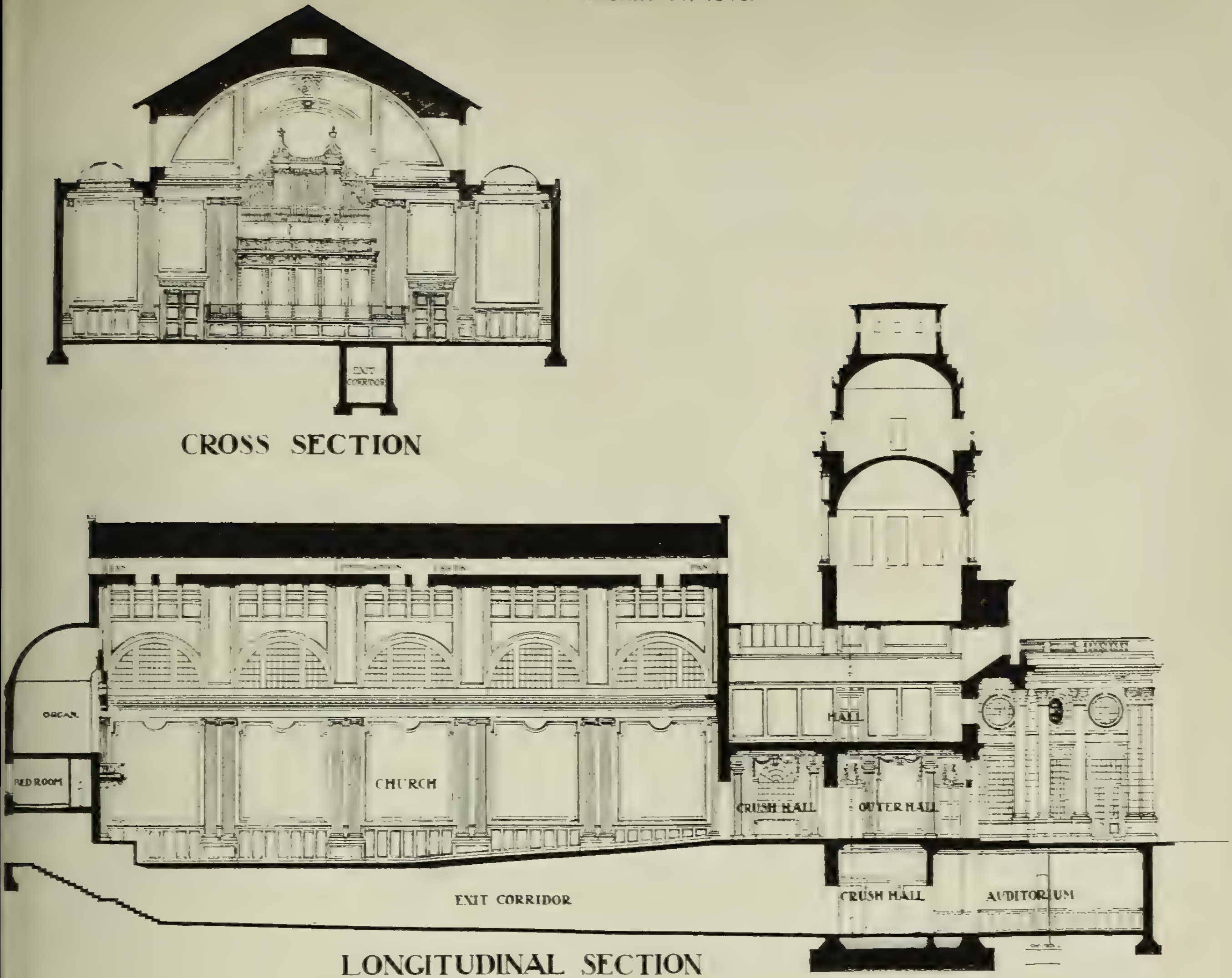


Second Premiated Design, by Messrs. MacLaren, Sons & Soutar.

EXTENSION TO THE HARRIS ACADEMY, DUNDEE.



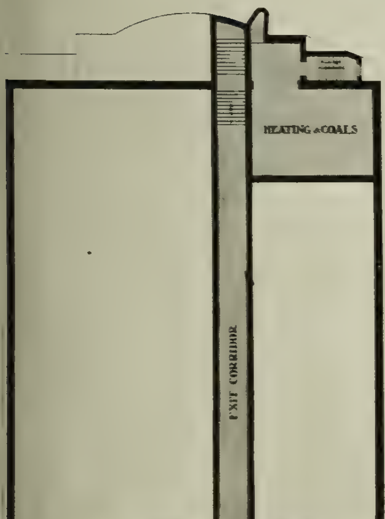
No. 4, NEW BURLINGTON STREET, W.—MESSRS. NIVEN & WIGGLESWORTH, ARCHITECTS.



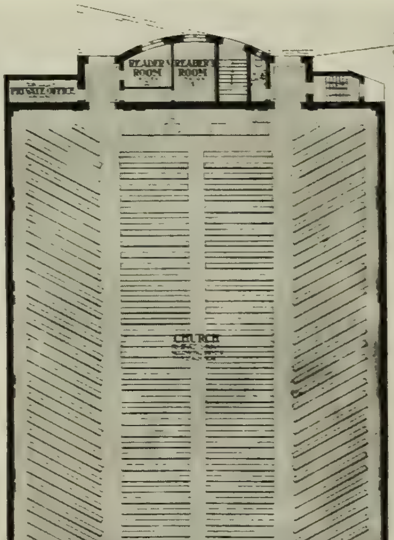
CROSS SECTION

LONGITUDINAL SECTION

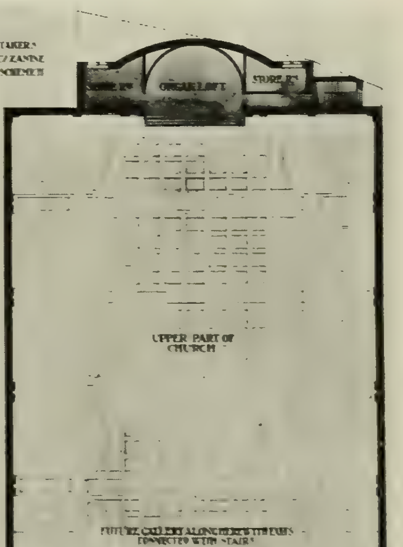
SCALE OF FEET



BASEMENT PLAN



GROUND FLOOR PLAN



FIRST FLOOR PLAN

COMPETITIVE DESIGN FOR THE THIRD CHURCH OF CHRIST SCIENTIST.—Messrs. Wills, Anderson & Kaula, Architects.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

OL. CX.—No. 3811. FEBRUARY 18, 1916.

FIRE AND OPPORTUNITY.

THE burning of the Houses of Parliament at Ottawa, a calamity which has awakened profound sympathy throughout the world, leads naturally to the thought of other fires which have led to noteworthy architectural changes, most of which—to ·ank—have been to the advantage of the cities in which they taken place. It was the siege of Athens by the Persians, the destruction of her temples by fire, that made room the architectural glories of the age of Pericles; national ·ring followed by national achievement then, as usually , operated as a spur to national pride, as a stimulus to onal art, and to the fires of 480 B.C. may not unjustly be ibed the splendour of the Parthenon. We all know that ustus found Rome brick and left it marble—that is, that he aced the congeries of mean and often mud-built streets with stately buildings of an imperial city; it is less often rememd that the city which he thus created was practically wiped by the fire of 66, and that it was the much-maligned artistic us of Nero, with his strong Hellenic tastes, that laid out ie upon a new and nobler plan, which, owing to internal irbances and foreign wars, was finally only carried out by iitian over twenty years later. That Emperor indeed was to ie of the first century what Sixtus was to Rome of the later aissance; Domitian worked with Rabirius as Sixtus with iini, and many of the improvements of which Trajan finally the credit were due in fact to his less popular predecessor, himself carried out in many places the grandiose schemes ero. Most of the important buildings of imperial Rome ·h posterity flocks to visit date from the generations after fire of 66; if we think away the Colosseum, the Arches, the im of Trajan, the bulk of the buildings on the Palatine, all but the portico of the Pantheon, imperial Rome is nk indeed. Nor can we doubt that Rome, after the fire of ike London after that of 1666, was a healthier as well as a r city. The crowded quarters near the Tiber, the home of he myriad strangers who flocked to the city, and whose ence made Cicero term her *sentina gentium*, the cesspool ie nations, were swept away; purification by fire was, and io idle word in matters of health, and those who had no ne farms to escape to from the smoke and noise of daily life Rome found quarters better than they had had before. n the time of Augustus onwards building laws were strict; *lœ* or flats were limited to five stories, and the increasing ber of rich men's villas within and about the city minimised amount of waste ground which had been used before for al or the casting-out of bodies of slaves and other nitary or inhuman purposes.

Rome was to endure many sieges, many conquests on the part ie barbarians, but even Alaric spared her the worst horrors re; and, in spite of being five times sacked by the ibards, the city suffered less than might have been expected, igh Gregory the Great wrote to the imperial Government onstantinople, "For twenty-seven years we lived in terror he Lombards, nor can I say what sums we had to pay i." Much more terrific, because more modern and carried by a more civilised people, was the sack of 1527, but the ie we think of, apart from classical antiquities, the Rome he fountains and domed churches, of palaces and colones, is in great measure due not to disaster by fire or sack, to the creative instincts and high artistic feeling of a ession of pontiffs who were able enough to appreciate genius of their architects and decorative craftsmen and ligent enough to give them a free hand.

So, too, the Fire of London—that calamity which we speak ithout prefix as "the Fire"—with all that it did, was good in the disguise of evil. Like the Rome of Domitian, the London of Charles II. was fortunate in possessing an architect of supreme genius, to whom the chief features of the remodelled city were entrusted for a generation. Old London—the London of before the Fire—we can reconstruct from prints and drawings of itself and from parallels elsewhere, Chester and Ludlow, Oxford and the Newcastle of two generations ago; the city as we know it is due to Wren, from the soaring dome which to most of us is London to the little church of St. Benet, from Bow to the church of St. Magnus close by the river. The city inhabited since Roman days disappeared as if by magic, and on its ruins arose the City as we know it, shorn, alas, of many of Wren's churches, but still dominated by his genius!

The two supremely important lay buildings left untouched by the Fire were both, strangely enough, doomed to perish in later conflagrations—the picturesque buildings of old Whitehall, Inigo Jones's Banqueting House excepted, in the Great Fire of 1697, which swept away so much of historic and artistic importance, and the Houses of Parliament, the glow of whose destruction was recorded by Turner in a painting of his greatest period. Both of these fires were due to carelessness, and both did much irreparable damage; but we can at least console ourselves with the thought that Wolsey's other palace, Hampton Court, was a finer specimen of its age's architecture than ever was old Whitehall, and that the present Houses of Parliament, criticise them in detail as one may, are in the aggregate a noble pile, worthy of an imperial city. The loss of the Banqueting House or of Westminster Hall would have been a greater one for posterity than that of the larger and more rambling piles of buildings that made up old Whitehall and the earlier Houses of Parliament; it was better to lose some of the artistic treasures of Charles I. at Whitehall and the House of Commons whose rights he invaded than the building on whose floor he stood for his mock trial, or the fatal window of that Banqueting House which his father had built and he had finished, and, as many generations held, had consecrated with his blood.

The destruction of Moscow in 1812, commonly held to have been self-inflicted, which marked the turning-point of Napoleon's fortunes, was by no means that city's first experience of fire. At least four conflagrations occurred during the eighteenth century, in spite of Peter the Great's order that only stone houses should be built within the walls of the town an order founded on the ghastly experiences of the sixteenth century, when the Tatars burnt the city, leaving, it is said, only 30,000 inhabitants alive out of 200,000. The new Moscow that arose after the Napoleonic wars has, as a Russian city, that rare quality of the picturesque which is usually lost when a new town is built on the site of the old, and not even trams and railways can injure the impression that she makes on every traveller. We can only hope that other cities of Europe destroyed by the modern invader may be as happy in their reconstructors.

Rome has been fortunate in her rulers and architects; Greece in those who rebuilt her temples; England was supremely fortunate in having at call in her hour of need the greatest architectural genius whom she has yet produced; her Houses of Parliament were replaced by statelier if a less interesting successor; and while we sympathise with Canada in the calamity, perhaps the outrage, which she has undergone, let us hope that she, too, may find her Wren or her Rabirius ready to add his genius to what she has herself to offer, one of the noblest sites, one of the greatest opportunities, to be found in all the world. If this be so, we may again see creative art rising Phœnix-like from the ashes of destruction.

NOTES.

Carpenters' Hall Lectures. A VERY interesting lecture was given on Wednesday last week at Carpenters' Hall on the Sculptures of Reims Cathedral by Mr. Arthur Gardner, which was illustrated by some exquisite lantern slides. The lecturer expressed his conviction that in destroying the wonderful thirteenth-century sculptures of the west front the Germans had done what would prove more disastrous to themselves than to the people the records of whose ancient tradition they had partially obliterated, and he hoped that in any future restoration of the building care would be taken to preserve the sculptures as they were. We agree with this view unless casts are in existence which would enable the restoration of sculpture to be practically so complete and accurate that, to future generations, it would convey the impressions and feelings that we who know the originals have felt. There are sculptors whose knowledge and skill are so great, and whose sympathies are so keen, that, given good casts, they might be able to produce work which would be almost identical with that of the French imagers. But however that may be, we may feel sure that the French, with their sure artistic insight, will not, when touching the sacred stones of Reims, do anything which the world will regret, for we have long passed the days when the mistakes made in the time of the Gothic revival are possible.

The Right of Criticism. WE learn from a contemporary of an interesting decision bearing on the right of criticism in the public Press. Comments were made in a Dundee paper on a discussion which took place on the cost of an extension to a school, which the Chairman stated had cost about double the official architect's estimate, and proposed that his agreement should be revised. The local paper stated that under the present system it was understood that the Board's architect should carry out small works, while larger ones should be put out to competition, and added:—"The rule, as interpreted, is an absurdity, and puts a premium upon a certain kind of advice." The architect brought an action against the journal, arguing that the article accused him of being unfaithful to his trust and acting corruptly for his personal benefit. The first Scottish Court dismissed the action, the Court of Appeal upheld it, and the House of Lords agreed with the first court, Lord Haldane saying:—"Any person in the position of architect to a school board must submit to a large amount of public criticism—such criticism would not be permissible in the case of a private person. In such cases malice at law was rebutted and malice in fact must be proved." Personally, we think all depends on facts, but if these are not proved up to the hilt those who make such statements should be most severely penalised. With the ex-Chancellor's statement—"It is important that the Press should be at liberty to criticise fairly public men"—we are in complete agreement, though we may say that recent events leave us in considerable doubt as to the ability of public men to take in good part criticism which certainly contains little that is personal and is dictated by the desire to obtain efficiency without regard to persons.

Courts Emergency Powers Act. WE may draw our readers' attention to an important decision of the Court of Appeal, delivered January 1, under the Courts Emergency Powers Act, 1914, in the case of Ness *v.* O'Neil. The plaintiff was the lessor of certain premises under an agreement which made the rent payable monthly, and which gave a right of re-entry if the rent remained unpaid for ten days after it was due. The rent was left unpaid for a longer period than ten days after it was due, and the plaintiff issued a writ to recover possession. Sect. 1 (1) (*b*) of the Act provides that no person after the passing of the Act shall "levy any distress, take, resume, or enter into possession of any property, exercise any right of re-entry, foreclose . . ." except after application to the Court. The writ had been obtained without leave of the Court and the defendant contended that the Act applied. The Court of Appeal have held, following a case, *in re* Farnol Eades, Irvine, & Co., where debenture-holders were applying for the appointment of a receiver, that the section applies to proceedings of a summary nature, and, notwithstanding the inclusion of the word "foreclosure," does not apply to proceedings in the nature of foreclosure by action. This decision is of importance to landlords, but it must be noted that, although an action can be instituted without leave, yet the judgment cannot be enforced by a writ of possession until leave is obtained.

Criticism or Abuse? THOSE who are employed in any capacity in connection with the decorative scheme of Westminster Cathedral have much to contend with, because, in the nature of things, their task is a most difficult one in the present age. The number of architects who can design a building of outstanding architectural merit are few; the number of those who can direct the work of a body of craftsmen in the design and execution of a decorative colour scheme—controlling, guiding, and at the same time never cramping them—is fewer still. If, i circumstances, the result is not all that extravagant fancy or ide would have it, we may yet have what gives us lasting pleasur is a credit to the æsthetic talent of the age. But the greater pa the letters which have appeared in the columns of the *Observ* the Stations of the Cross and the decorations of the chapels n with reason have been consigned to the wastepaper-basket as for the most part both ignorant and offensive. Most of the w hide their anonymity behind combinations of letters and pseudo and would hesitate to repeat their views above their signatures. suppose the reason we are not favoured with these effusions is the writers presume that in an architectural journal they woul judged and found wanting, however picturesquely they compar decoration of Westminster Cathedral with that of a bathroo underground convenience. If some of the critics will send us o their wisdom and knowledge alternative suggestions, showing should be done, we shall be glad to illustrate them for the gr guidance of artists and of posterity!

Economy in Railway Travelling. AS, both during the war and for some time aft is ended, every class will be called upon exercise strict economy, it seems a suitable tim raise the question whether the railway compa may not be wise to revise their policy of abolis the second class and retaining the first class, and whether, in altered circumstances created by the war, a more advantag system, both for the companies as well as for the general pu would not be to abolish the first class and retain the second c except possibly in the suburban districts where the interests of sea ticket holders are concerned. Even before the war broke out first-class compartments were, on long-distance trains, comparati empty, and represented unremunerative dead weight to the compan but in the altered condition of economic affairs still fewer per will be in a position to afford or feel justified in spending double necessary amount for performing a journey, yet to many— especially to ladies—the increased comfort and diminished crow to be secured at a small extra cost, as is the case in the second c is a very great convenience.

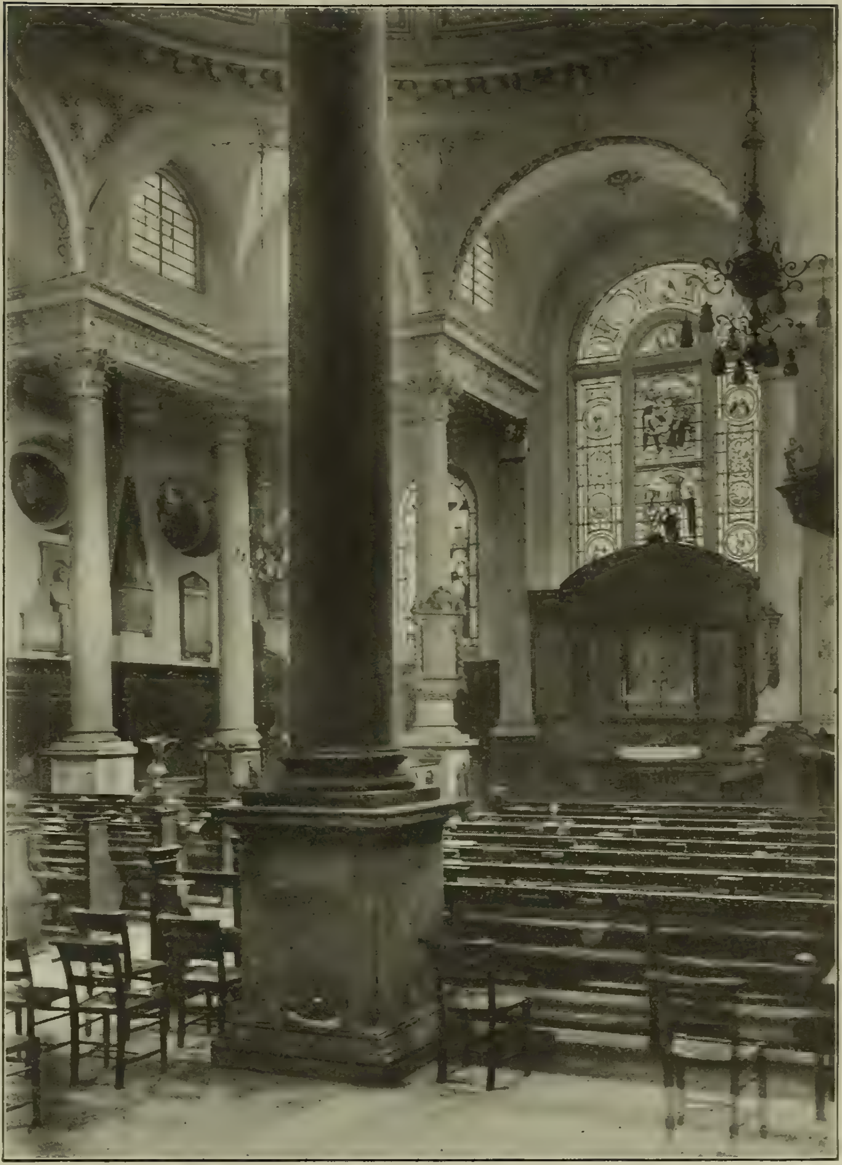
Doncaster Town Planning. THE development of Doncaster has been chec by the war, but, as the housing problem is very ac the Doncaster Rural District Council have de mined to go on with their town-planning sche in order to control effectively the character and growth of the mining villages. A good beginning has been made, and the L Government Board have been asked to sanction the formation of a t area. A great problem is caused by the low altitude of the gro where at times large areas are actually under water. Very l of the land to the north and east of Doncaster is more than 2 above the sea level, and as the fall of the Don and the main dr which enter it are very slight, the provision of adequate drai is unusually difficult. In the Askern area already planned ou 5,170 acres 2,436 are less than 20 ft. above the sea level. Regulat have been drafted and are receiving the consideration of the L Government Board, with the object of preventing the use of low lands for the erection of dwellings, though it may be uti for industrial buildings, and one of the important provisions of scheme gives the authorities power to differentiate on this p One pleasing feature of the development so far has been the gratif response of the colliery providing housing accommodation. T have willingly co-operated with the authorities. Their gene interpretation of their responsibilities is exhibited in the fa model colliery village at Woodlands; in the village at Park between Carcroft and Owston Park, in connection with the Bul Colliery, and in the progressive character of the admirable vill at Edlington, Askern, and Rossington. These form an exa for future efforts in the same direction. In the meantime the taken by the local authority under the powers of the Town Plan Act, 1909, may render the development of the South Yorkshire field not only unparalleled in industrial expansion, but also in preservation of the amenities of the district, which have bee ruthlessly sacrificed in the case of the development of the Du coalfields.

Honours to Architects. WE are very glad to record the fact that an those members of the architectural profession have done distinguished service in the war is Ca H. P. G. Maule, of the Honourable Artillery Comp who has been awarded the Military Cross. Captain Maule distingui himself in his professional career both as the designer of admirable domestic work and as an untiring enthusiast in the of architectural education, and, as past Headmaster of the Arch tural Association Schools, is responsible for much of the succe that very virile and useful body. It is also pleasant to hear Lieutenant Maurice E. Webb, who left his professional work to the forces, has been mentioned in Sir Ian Hamilton's despat December 11, 1915.

HE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

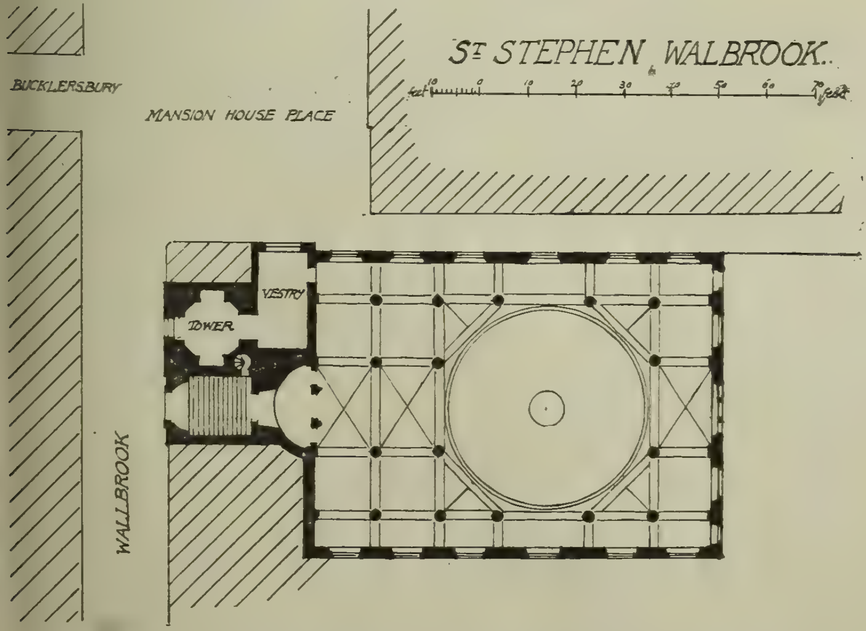
No. XIII.—St. Stephen, Walbrook.

VALBROOK preserves the name of a stream ich, rising in the swamps beyond Moorgate, ved into the Thames at Dowgate, and on banks was built a church dedicated to St. phen, which dates as far back as Henry I., l was rebuilt in the reign of Henry VI. ough the instrumentality of Sir Robert cheley, who had been twice Lord Mayor. e church was repaired in the reign of Charles I., t was totally destroyed in the Great Fire. er the Fire the neighbouring church of Benet Sherehog in Pancras-lane was not uilt, and its parish was united with that St. Stephen. The present church, which s one of the earliest to be rebuilt after the e, was completed in 1679 at a cost of £7,652, l it is singular, in view of the fact that many the sites of Wren's churches are similar in a and shape, that he never attempted another ign showing the same grasp of the effects be obtained by masterly planning, for in design of St. Stephen all the problems be solved in a Renaissance church meet an equate and fitting solution. The square ce formed by the ranges of columns under dome provides the congregational space uired; the groined plaster vault of the tre compartment of the nave and the responding shorter transverse vault across ress the cruciform idea; the church is ingly marked, while the columned spaces ich fill up the angles give a variety of spective effects and a sense of space which vanting in other churches of equal dimensions. It is difficult to realise that the area covered smaller than that of Bow Church; it is a ious subject for speculation that, having ught out this dream of architectural form, ren could have been content to build ch churches as Christ Church, Newgate, St. Andrew's, Holborn, unless it is that the luence which prevented the execution of first design for St. Paul's were active in posing the design of smaller buildings in ich mediæval tradition was ignored. On other hand, Wren may have been dissatisfied th the external forms by which a church of type could be expressed, or may, like many dern architects, have disliked repeating idea or working on the same type. Be this it may, St. Stephen, Walbrook, will be to time an instance of the supreme expression poetry in architecture—a proof that in the nds of a master combinations of form in

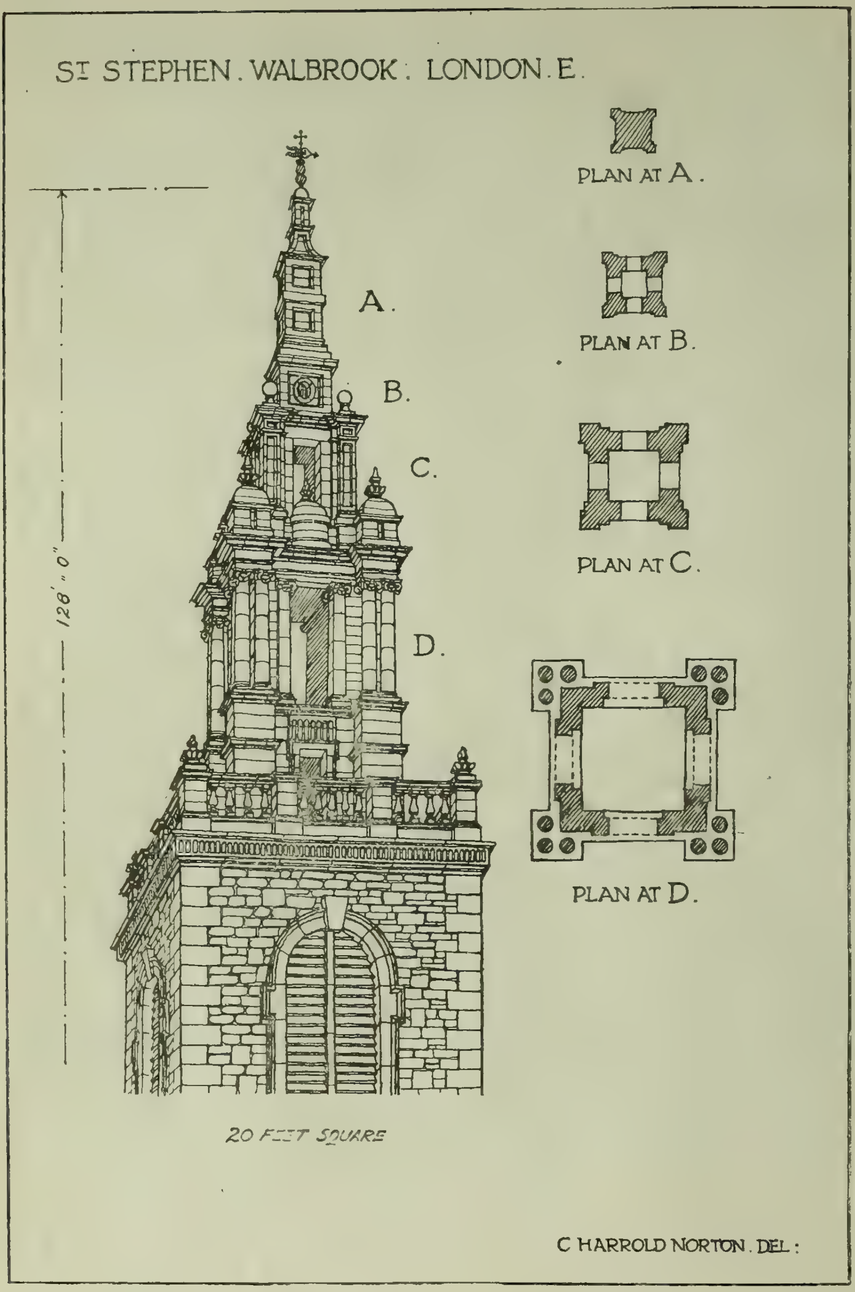


Wren's Churches: St. Stephen, Walbrook.

Renaissance architecture can be made as expressive as the earlier combinations of mediæval and primitive styles, and that the thought conveyed in any style is infinitely more important than the medium through which it is expressed. The effect of the interior depends on the skill with which square, octagon, and dome merge into one another in the design of the centre feature and in the skilful disposition of the remaining columns, which, with a minimum interference to the seating accommodation, produce a maximum perspective effect. The pulpit and the woodwork are good, and, though the church suffered a certain loss in character in 1888, when the high pews were removed by Penrose, the interior has gained in apparent spaciousness. There are many good monuments in the church, the oldest of which, on the column to the south side, is in memory of William Lilbourne, who died in 1678; opposite to which is a very pleasing Baroque monument to Robert Marriot, a rector who died in 1689. Another fine monument is that to Percival Gilbourne, an apothecary, who died in 1694, which takes the form of a bust with architectural accessories. A very pleasing monument is that to G. Griffin Storestreet, a managing director of the Phœnix Assurance Society, who died in 1802. Externally the only noticeable feature is the steeple, which rises above the adjoining buildings and can be well seen from Mansion House-place. The repeated emphasis given by the successive square stages recalls a similar note which



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)



distinguishes Spanish Renaissance towers, though the suggestion must be purely accidental; but the design is singularly happy, possessing unusual character and dignity.

No. XIV.—St. Bride.

The Church of St. Bride is usually coupled with that of St. Mary-le-Bow, since the two steeples are the most important architectural features of Wren's London churches; but St. Bride has the disadvantage of being closely surrounded by other buildings, which renders it impossible to study it to full advantage. The date of the erection of the first church is unknown, but mention is made of it in 1222. The living is in the gift of the Dean and Chapter of Westminster.

After the Great Fire the present church was built in 1680, the steeple not being completed till 1701. The total cost of the church was nearly £12,000. In 1764 the steeple was badly damaged by lightning, and 85 ft. of its height was taken down and rebuilt by Sir William Staines, who reduced the total height by 8 ft., leaving it 226 ft. in height instead of 234 ft. as originally designed.

The design of the diminishing stages of the steeple is beautiful if somewhat prosaic compared with the greater variety and complexity of that of St. Mary-le-Bow; its detail, and that of the church generally, suggests a somewhat freer rendering of the Renaissance than that adopted in St. Mary-le-Bow. Internally, this freedom is expressed in the piers of the nave arcade, formed of two columns which intersect one another, forming an elliptical pier set at right angles to the axis of nave, with a pilaster placed at their intersection, which carries the gallery front. These and other details suggest a Renaissance rendering of fundamental principles of Gothic design, which give a somewhat coarse and crude appearance, detracting from the bold and dignified conception of the interior, an effect which is emphasised by the unpleasing decorative scheme. It may be said that the beauty of St. Bride, like that of St. Mary-le-Bow, is mainly external, and that in spite of its dimensions it cannot be considered to hold a high place among the interiors designed by Wren.

Although the church has galleries they are not expressed externally, but are carried across the centre of the windows, which do not mark the internal divisions. The most pleasing details internally are the entrance door cases of the vestibule on either side, but the woodwork generally fails in refinement and interest, and is mechanical in effect. The most noteworthy monuments in the church are those erected to Jasper Nedham (1679), and Carey Stafford, a Whitefriars glass manufacturer (1760), and one to Isaac Romilly (1759), all of which are placed in the broad entrance vestibul The best near view of the steeple is tha obtained from Salisbury-square, nearly on th diagonal of tower, emphasising its some what monotonous effect, as can be seen by th excellent photograph which we give on page 14 taken by Mr. George Trotman.

* * *

CORRESPONDENCE.

The Erection of Munition Works.

SIR,—I understand from your columns tha the Government have not given the architec of the country that consideration due to the by utilising their services where they could ha been most valuable. Some weeks of invest gation on the erection of munition works ha been placed before the Ministry of Munition demonstrating that there had been much wast which might have been avoided, as well delay, which would have been impossib under the supervision of properly-qualified me I have proof of the absolute waste of hundre of thousands of pounds in the erection of o munition works alone, and this a comparative small one to those now going on in differe parts of the country, reports from which I a now receiving. Cannot the Institute take t matter up and bring weight to bear upon t authorities, as the wastage must amount thousands daily? ASSOCIATE.

Should Art be Artless?

SIR,—In the current number of the R.I.B. *Journal* there appears a review by Mr. Franc Bond of Sir T. G. Jackson's "Goth Architecture in France, England, and Italy.

Mr. Bond, in the course of an appreciati analysis, quotes from his author the followin passage:—

"The men of the Middle Ages did thing beautifully because they did them unco sciously . . . they had the inestimab advantage of having no choice; they knew other style but their own. . . . So lon as our work is consciously imitated from wh was done in other days and other condition so long will it remain unreal."

Mr. Bond describes this as an admirab pronouncement and further comments upo it thus:—

"Each architect knew nothing and car for nothing but the work of his own day, an this narrow-mindedness was his artist salvation. We moderns know too much."

It would seem that both Sir Thomas Jacks and his sympathetic reviewer have err grievously against their own convictions adding further to the prodigious mass antiquarian lore, for, on their own showin the purchase of their works is likely contribute to our artistic damnation.

In view of the dicta of these two gentleme it is amusing and disconcerting to take u the R.I.B.A. *Kalendar* and turn to the recon mendations of the Board of Architectur Education, the "Advice to Candidates," an the imposing "List of Books Recommende to Students."

Some of our hard-working architectur aspirants will be pleased to learn from tw such authorities that in "narrow-mindedness lies their "artistic salvation," and that they ma with a good conscience emulate the men of t Middle Ages and "know no other style b their own."

Is our whole scheme of architectural researc and education a waste of time and money?

J. ALEXANDER PIRIE.

Wren's Churches.

SIR,—Mr. Lindley Latham's suggestions th models of these notable old churches should made for permanent public exhibition w no doubt meet with general approbation, a I would advise any of your readers who ta an interest in London's ancient buildings go and view the charming models of "O London Bridge," "The Tower," etc., no permanently on exhibition at the Lond Museum, Stafford House, S.W., made by M John B. Thorp, and they should also see t realistic models he has just completed of t city's ancient gates, as they are exactly t kind of models suggested by Mr. Latham.

Mr. Thorp being an old friend and former pil, I take deep interest in his beautiful rk, and I should like to see an illustration these gates in your journal, as I am sure ey will give pleasure to many architects who too far off to visit London.

FREDK. NESBITT KEMP.

SIR,—I quite agree with Mr. Latham's ter of last issue as to collecting all the information comprised in plans, models, and architural literature of every building erected by ren. I thought of suggesting to make a ginning with this valuable collection and cing it in or near the library of St. Paul's if commodation could be obtained in this nerable edifice. All lovers of art treasure, m sure, will give Mr. Latham's proposal their st support.

JOHN W. GRANT,
A.M.C.Inst.(Lond.).

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cond-Lieut. C. Howard Jones. A.R.I.B.A.: The Military Cross for an Architect.

SIR,—The award of the Military Cross Second-Lieut. C. Howard Jones, A.R.I.B.A., l probably interest the architectural d building professions. Mr. Howard nes, who joined the Public Schools' ttalion at Epsom immediately after the outeak of war, was up to that time on the hitectural staff of H.M. Office of Works, rey's-gate, Westminster, where he had been gaged since serving his articles with Mr. r Jones, A.R.I.B.A. (Ivor Jones and Percy omas), Cardiff.

He has been responsible on two occasions exceedingly useful work. As Brigade out Officer he has discharged difficult obsertion duties in the front trenches and has bmitted reports and sketches of great portance. On another occasion, in company h a fellow-officer and two men, he figured an exacting wire-cutting episode between British and German trenches in the neighurhood of Loos.

From the Public Schools' Battalion Mr. ward Jones was appointed as Second- eut. to the 3rd Welsh, and after being ined with them at Cardiff and Porthcawl s drafted out to France attached to the d Welsh, and was present at the German nter-attack after the battle of Loos.

IVOR P. JONES.

Pre-War Contracts and the Government.

Ve have received the following open letter this subject, which is of particular public erest :—

e President, the National Federation of
Building Trades Employers.

SIR,—I have read with considerable interest account of the meeting of the National deration of Building Trades, and particularly speeches and resolutions on the subject pre-war contracts.

rejoice to see by the final resolution that National Federation is to move, and I trust ckly, by approaching the Government upon s very urgent and serious question.

A very large number of people, not only nected with the building trade, but in sorts of trades and businesses, are being iously worried by the position in which y are placed. As the present law stands y have to bear the whole burden (however ssly unjust) of their inability, attributable ly to the war and to no other cause, to il contracts entered into previous to the (in a very large number of cases only a weeks previously), while the other parties he contract can exact the uttermost farthing, the utter ruin of a large number of their tims, while they remain comfortable, because remedy is given by the Common Law, as it been interpreted by eminent judges in the t, who had never in contemplation such a as we are now engaged in.

The condition of affairs created by this alling calamity of our "State being at " has therefore no real effective recognition he courts.

notice several of the speakers jumped ahead the main object, which should be kept in forefront of any action taken by the ional Federation and allied associations, viz., to press the Government to pass a short Bill giving power to the courts to consider the effect of the state of war upon any case of pre-war contracts brought before it, and to have power to give relief and to do justice as between the parties, as the merits and details of each may in the discretion of the court require. If this Act is passed there is no doubt whatever that rather than face the ordeal of an exposure in the law courts the oppressive party in a contract would be willing to come to reasonable terms, whereas under the present position (where a contractor or lessee is suffering under an oppressive pre-war contract) he is like Dean Swift's "Man in his Shirt" against an unreasonable and greedy opponent armed to the teeth, with no remedy.

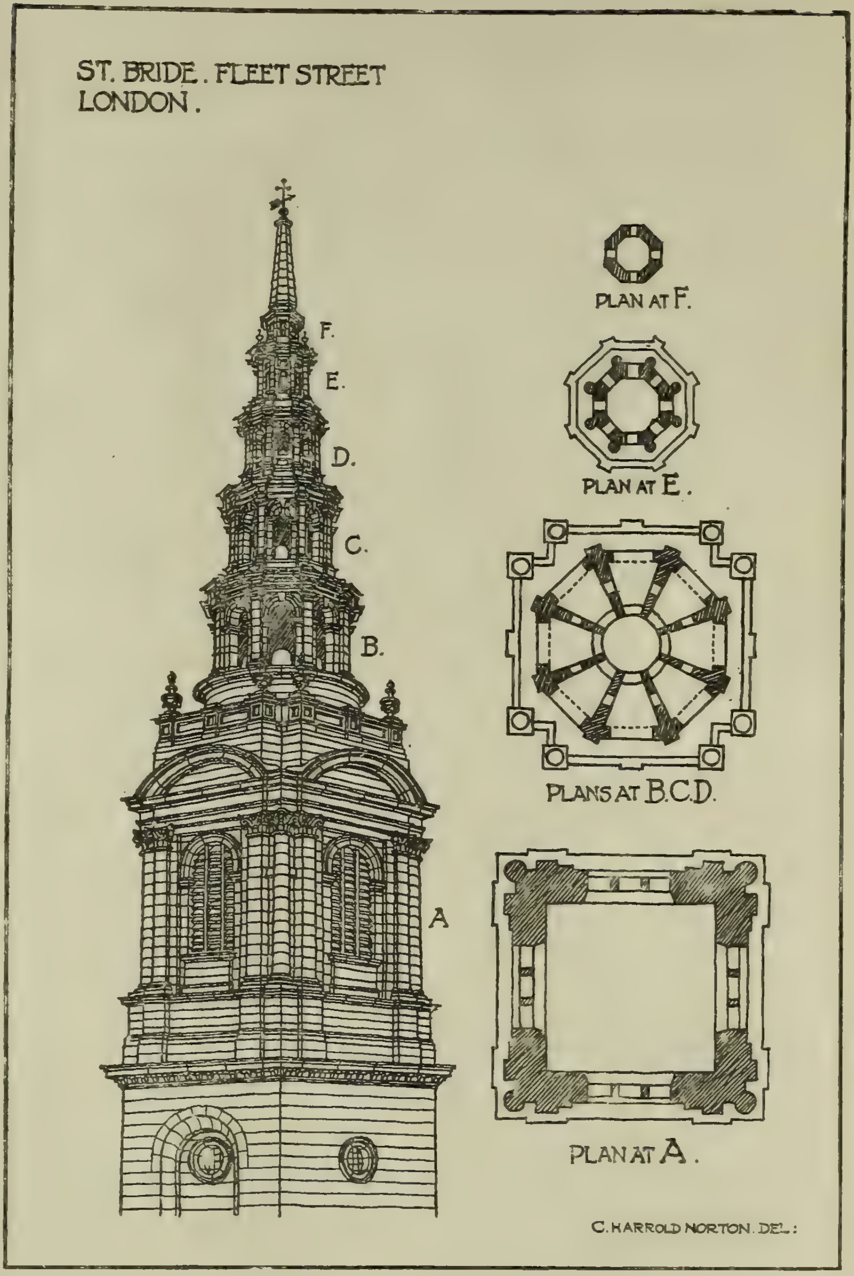
The Government are making appeals that every one is to do their utmost to assist the country and release "men, material, and money" for the country's assistance in the prosecution of the war, and I know of very many cases where people are prevented from doing all they might in this direction because of the serious position in which they are placed on account of these pre-war contracts and the responsibilities in connection therewith, tying them down to these affairs. There is no doubt that the Government from the very start have neglected a most urgent duty which should have been one of their first acts (as was done in France and Germany) immediately on outbreak of war, viz., to free their citizens from the consequence of pre-war contracts that were made impossible of fulfilment by the war, so that their countries might have the full benefit of all the energies of their peoples. Our Government has so far shelved this and other questions, with the results that we now find, having to approach and plead with the Government to do its duty, by knocking at its door, and repeatedly knocking, before it will act and permit justice to be done.

The question is therefore not one of asking the Government to make good losses, but it is a question of giving the right of entry to a court that shall have power to deal with any and every case brought before it upon its merits.

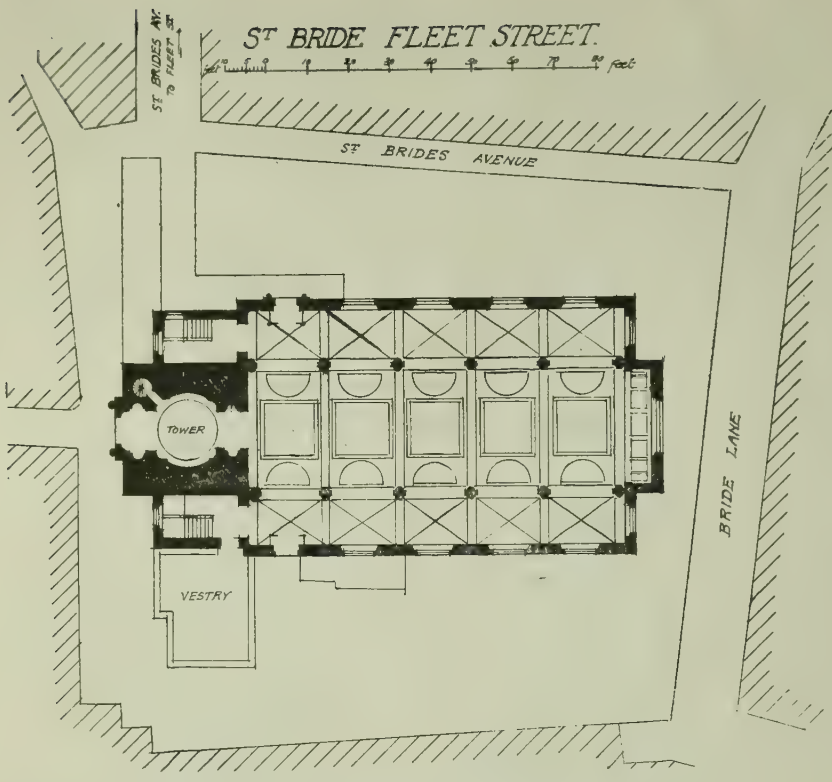
I trust that the National Federation will act quickly in this matter and press it (on these lines) upon the attention of the Government.

There are numerous cases that can be quoted all over the country of the oppressive state of affairs, not by any fault of the lessees or contractors, but solely on account of the war, and especially as proceeding with these contracts in most cases means competing with the Army and Government for "men, material, and money." Justice and the interests of the country call for immediate remedy.

HOWELL J. WILLIAMS, J.P., L.C.C.



Wren's Churches. (*See page* 138.)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TOWER
VESTRY
BRIDE LANE

(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

Wren's Churches. (*See page* 138.)

Painters' Rates of Wages.

SIR,—Will you kindly allow me space in your journal to reply to the letter of Mr. Depree, Secretary of the London Master Builders' Association, as contained in your issue of February 11? Your correspondent makes statements which are somewhat misleading.

The London Association of Master Decorators and the Society of Operative House Painters and Decorators, having agreed on the question of wages, referred certain working rules to the arbitrator, on the basis of such wage increase.

On the day appointed the President and Secretary of the Builders' Association, Mr. W. Lawrence and Mr. Depree, attended, and asked to be allowed to state the case for the builders, and consequently to be present during the proceedings. After consulting with the Master Painters and Operatives, the arbitrator agreed to allow them to remain, provided they gave an undertaking that their Association agreed on the rate of wages. This they would not do, and consequently the matter was proceeded with after they retired.

The arbitrator, in giving his award, embraced the rates of wages, a copy of which I enclose.

Mr. Depree says that the reference to the builders as contained in my previous letter should be ignored. Well, that appears to be the case of the Association of Builders, and were it not for the fact that members of Mr. Depree's Association are in the favoured position of employing painters at ½d. and 1d. per hour less wages than the firms they compete against, and thereby ignoring the only existing agreement between workmen and employers in the painting and decorating trade in London, less notice might be taken; but in face of the unfair competition put up, such argument lacks substance.

On very numerous occasions firms outside either Association of employers quote your journal when we have occasion to approach them on the question of wages, and refer to the rates tabulated therein. And in conclusion I again submit that the rate you quote can with all fairness be so altered as not to act detrimentally to the workmen; and it is because I think you desire to be fair to the whole of your contributors that I refer to the matter.

JOHN BANCROFT,
London Organiser, Society of Operative House and Ship Painters and Decorators.

LAW REPORT.

Elliott *v.* Biggs.

ON Monday at the Westminster County Court his Honour Judge Woodfall gave his decision in this case, which had been remitted back to the County Court by Mr. Justice Coleridge and Mr. Justice Low from the High Court.

Mr. G. A. Scott and Mr. B. B. Stenham (instructed by Messrs. Rutland & Craufurd) appeared for the plaintiff; Dr. C. Herbert Smith representing the defendant.

The case, which has been reported in previous issues of the *Builder*, was an action brought against the executrix of the late Mr. T. Woodbridge Biggs, architect, for alleged professional negligence in connection with the erection of a greenhouse at Chalk Pit, near Maidenhead. At the time there was no complaint, but subsequently an action was brought by Mr. Biggs for his fees as architect on another contract. Later on Mr. Elliott complained of alleged improper supervision by the late Mr. Biggs, and said he had been put to extra expense. When the case was before the County Court the judge non-suited the plaintiff on the ground that the Court of Appeal had held that wherever an architect issued a certificate he was acting in a judicial or quasi-judicial character, and that no action could lie against him for negligence. The only ground for action in such a case was allegation of fraud, and no such allegation was made here.

When the case was argued before the High Court it was contended on behalf of the plaintiff that the County Court Judge had discretion to deal with the matter on the amended particulars, and that therefore he was wrong in non-suiting the plaintiff. Mr. Justice Coleridge, with the assent of Mr. Justice Low, sent the case back to the County Court on the ground that it was within the judge's discretion to allow or disallow amended particulars.

Mr. Scott, in asking the judge to rehear the case, contended that the amended particulars disclosed a good cause of action. He quoted the cases of Rogers *v.* James and Armstrong *v.* Jones in support of his contention.

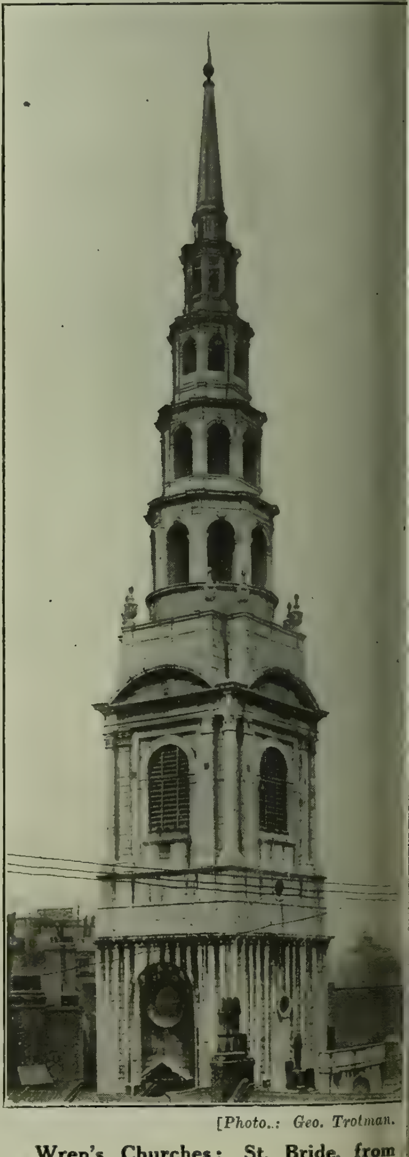
Judge Woodfall remarked that the order which sent the case back to him was certainly very peculiar. As regarded his own decision when the case was last before him, he was very clear, and it seemed to him that the High Court order did not deal with his decision at all. He saw no reason to depar from his ruling that a plaintiff could no enlarge his cause of action in further par ticulars; all he could do was to amend hi cause.

Mr. Scott said that his point before th High Court was that his Honour took to narrow a view of the position, and that h should have looked at both sets of particular in deciding whether or not there was a caus of action.

The Judge said it seemed to him that th only point he had to consider was whether, i his opinion, the further particulars disclosed cause of action.

Dr. Smith agreed that that was so, an submitted that no further particulars coul disclose a cause of action unless the cause wa shown in the first instance.

The Judge, in giving his decision, said th the issue of the certificate clearly gave no cau of action. The case was full of difficulty b reason of the way in which the order remittin it back to him was framed. But whatever th order was, he was, of course, bound by i According to his reading of the order he ha to determine whether the further particula disclosed a fresh cause of action. In construin that they had to consider what was the cau of action alleged, and it was that the archite had been negligent in giving his certificat In his view, that allegation gave the plainti no cause of action. Of course, the plainti might amend his claim, but he had not do so; all he had done was to give furth particulars. He must construe those furth particulars by having regard to the fir particulars, which, in his opinion, did not gi a good cause for action. The plaintiff had n disclosed a fresh cause for action, and therefo the application must be dismissed.



[*Photo.: Geo. Trotman.*

Wren's Churches: St. Bride, from Salisbury-Square, E.C. (*See page* 138.)

ENERAL NEWS.

Professional Announcement.

. Colbourne Little, F.R.I.B.A., of Hong- . has amalgamated his business with that ssrs. Thomas, Adams, & Wood, of Canton. will in future practise under the style or of Messrs. Little, Adams, & Wood, with s in Hong-Kong and Canton.

Folkestone-Dover Road.

e direct route between Dover and stone by the road near the top of the cliffs w open, the Kent County Council having ed the construction of a new piece of at Capel to replace that rendered unsafe nsequence of the effects of the landslide lkestone Warren on December 19.

Institution of Civil Engineers.

an ordinary meeting of this Institution, on the 8th inst., the following elections of bers. Associate Members, Transfer of iate Members to Members, and admission udents were reported :—Elected Members, lected Associate Members, 21 ; Transferred Associate Members to Members, 25; tted as Students, 9.

Sale of City Freeholds.

e freehold and leasehold premises, Nos. 0, and 92, Cannon-street, 16, 17, 18, and aurence Pountney-hill, 1, Suffolk-lane, and 2, and 33, Bush-lane, close to Cannon- t Station, covering a ground area of nearly 0 sq. ft., and having a rent roll of over 0 a year, have been sold by Messrs. nham, Tewson, & Chinnocks, Sir Howard k (Messrs. Knight, Frank, & Rutley) acting he purchaser.

Government Architect, Burma.

e learn that Mr. T. O. Foster, F.R.I.B.A., has been appointed Consulting Architect e Government of Burma in succession to ate Mr. Seton Morris, has taken over his s from Mr. E. J. Pullar, who has been ating. The new Consulting Architect d the Government of India nearly three ago at Simla, where he has since been at on different works and on the new Delhi. ious to that he was practising at West- ter for seven years.

Germany at Work.

. Joseph Pennell was at the outbreak of in Germany, having gone there some hs previously to arrange the Anglo- rican Section of the Leipsig Exhibition of and Crafts. During his stay he was given ties for carrying out a large number of ings of German dockyards, steel-works, es, and coal mines. The result of his work g the summer of 1914 will form the subject exhibition to be opened at the end of this h at the Leicester Galleries.

Recent Discoveries in Crete.

e Principal of King's College, Dr. R. M. ows, delivered a lecture at University ge on "Recent Discoveries in Crete." Burrows said the war had practically put p to excavations in Crete during the last years, and he went on to deal with the veries made within the last four or five s in the Palace of Cnossos, chiefly under direction of Sir Arthur Evans and the sh School at Athens. The restorations in the stairways of the Palace had been successful, but he could hardly say that t the way in which the frescoes had been red. The crystalline slabs were very and had been covered with plaster to ct them from the Cretan storms. In the t excavations the plaster had had to be off. It had generally been taken for ted that Cnossos was unfortified, but a French writer had challenged that and the latest discoveries seemed to that it had some fortifications—at all ts in middle Minoan times—and that it became unfortified. Dr. Burrows ed how the whole place was drained, the m being borrowed from Egypt. But in pipes that had been discovered were drain pipes, as used to be thought, but s for the supply of fresh water.

Gift of Plaquettes to the British Museum.

We understand that Mr. T. Whitcombe Greene has presented his collection of Italian and German plaquettes to the British Museum.

Burne-Jones's House.

The house in which Burne-Jones was born at Bennett's Hill, Birmingham, was found to be on fire on Friday last week. Although much damaged, the house was not destroyed.

The Dearth of Houses.

The dearth of houses in Birmingham was one of the subjects discussed at the meeting of the Trades Council recently, when a deputation was appointed to wait upon the Lord Mayor in reference to the matter.

Royal Institute of British Architects.

We are asked to announce that the general meetings of the Royal Institute of British Architects will in future be held at 4 p.m. instead of 3 p.m., as announced in the *Kalendar* and other publications of the Institute.

London County Hall.

It has been decided to suspend operations in connection with the erection of the new London County Hall. This step, it is stated, has been taken at the instance of the Ministry of Munitions, which desires to have the workmen released for the purpose of aiding in the construction of munition factories in various parts of the country.

Site of the Old Royal Infirmary, Manchester.

The question of what use shall be made of the site of the old Royal Infirmary in Piccadilly, Manchester, is again to be discussed by the City Council, a resolution having been passed to rescind all existing resolutions on the subject and to reconsider the question. Among the suggestions previously made were that an art gallery and library should be erected; that the site should be used for tramway purposes only; that it should be retained as an open space, and that it should be used as a military drilling ground.

Greek Reliefs.

Mr. A. Hamilton Smith, Keeper of Greek and Roman Antiquities at the British Museum, read an illustrated paper on the 8th inst. on "Some Greek and other Reliefs Recently Acquired by the British Museum," before a meeting of the Society for the Promotion of Hellenic Studies held at the Society of Antiquaries' rooms, Burlington House. Photographs were shown of votive and tomb reliefs, the latter including single figure, double figure, and group examples. Mr. Smith mentioned that one of the Greek reliefs recently acquired was found in a London builders' yard, where it had lain for some years. Another was found in Jersey, where it had formed part of the pavement of a cottage yard, fortunately having been placed face downwards.

British Museum Closing.

The Director of the British Museum announces that, in accordance with the decision of the Government, the exhibition galleries of the British Museum (Bloomsbury) and certain of the galleries at the Natural History Museum will be closed to the public on and after Wednesday, March 1. The Reading-room (including the newspaper-room) will remain open to ticket-holders as before, except that from March 6 it will be closed at 5 p.m. instead of 7 p.m. until further notice. The room will be closed for cleaning, as usual, on March 1 to 4. The Students'-room of the Department of Manuscripts will remain open so long as sufficient staff is available for its service. Due notice will be given if it should be found necessary to close the room, in which case arrangements will be made for the supply of MSS. in the North Library for the use of such students as may satisfy the Director that they are engaged in studies of serious importance. The students' rooms of the other departments at Bloomsbury will be closed. Applications for access for special reasons should be addressed to the keeper of the department concerned. The photographic studio will remain open under the usual conditions. The students' rooms at the Natural History Museum will continue to be accessible to approved students.

An Architect's Estate.

Mr. John Sutcliffe, of Hazelwood, Hebden Bridge, architect, whose death occurred January 2 last, has left estate valued at £15,240 4s. 11d. with net personalty £8,931 19s.

Town-Planning Lecture in Madras.

His Excellency the Governor presided at the opening lecture on Town Planning which Mr. H. V. Lanchester, the Town-Planning Adviser to Government, delivered at the Engineering College. Mr. Lanchester's inaugural address was devoted to the ethics of town planning.

New Luton School.

The Education Committee of Beds. County Council reported at their last meeting that an architectural competition for designs for a new secondary school for girls at Luton had been carried out, and a set of designs prepared by Messrs. J. R. Brown & Sons, of Luton, had been selected. No steps can be taken at the present time with a view to commencing the building of the school.

The Old Windsor Elms.

The Windsor Town Council have decided to cut down between twenty and thirty old elms in King Edward VII. Avenue, near Windsor Castle. During a gale one of the trees fell across the roadway, and a committee was appointed to inspect the trees and report. It was decided by nine votes to eight that all the elms should come down, including the four trees forming part of the avenue to the Castle, subject to the approval of the Woods and Forests Department.

Artists' Rifles, O.T.C.

One effect of the Earl of Derby's recruiting scheme has been that a large number of professional men from the technical trades, including architects, engineers, and surveyors, having realised that they must no longer delay offering their services to the country, have applied to the Artists' Rifles, O.T.C., for direct enlistment. Moreover, of those who have attested under the scheme, many have felt impatience for their groups to be called up, and, solving the problem for themselves, have applied for and obtained transfer from Army Reserve B, in which Derby recruits are placed, to some regular or Territorial unit. This course is favoured by men whose education and social position render them eligible for commissions. The transfer of men who have been placed in Army Reserve B may be effected as soon as possible after they have been approved and found medically fit, or postponed until a later date, provided that at such later date the requirements of the service require the transfer. The corps has a special class for training members who desire to obtain commissions in the Royal Engineers and Pioneer Battalions, and for testing candidates for such commissions.

The Mineral Resources of Great Britain.

The Board of Agriculture and Fisheries desire to give notice of the publication of three volumes of Special Reports on the Mineral Resources of Great Britain, which have been prepared by the Director of the Geological Survey in response to numerous inquiries that have arisen through the conditions brought about by the war. In Volume 1 the uses, distribution, treatment, and output of tungsten and manganese ores are dealt with, and particulars of the mines, active and inactive, are given. Price 1s. The second volume deals with the sources, uses, and treatment of barytes and witherite (the sulphate and carbonate of barium). The mines from which the minerals are or have been raised are described in detail. Price 1s. 6d. Volume 3 of the series deals with the properties, uses, treatment, and modes of occurrence of gypsum, anhydrite, celestine, and strontianite. Details of the workings in all parts of Great Britain are given, with statistics as to output. Price 1s. Copies may be obtained through any bookseller from Messrs. T. Fisher Unwin, Ltd., 1, Adelphi-terrace, London, W.C., who are the sole wholesale agents to the trade outside the County of London; or from the Director-General, Ordnance Survey Office, Southampton.

Leading Contents.

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ILLUSTRATIONS.

Wren's Churches.

WE illustrate the steeple of St. Bride and the interior of St. Stephen, Walbrook, from "The Churches of Sir Christopher Wren," by J. Clayton, published by Messrs. Longmans, Green, Brown, & Longmans, which we give by the courtesy of Messrs. Longmans, Green, & Co. Further notes on these churches will be found on page 137.

Hotel at The Hague.

WE illustrate a fine design for a Hotel at The Hague the execution of which is for the time being postponed.

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CHARING CROSS BRIDGE.

AN inspection of the drawings deposited with the South-Eastern Railway Company's Bill reveals the fact that it is intended to strengthen the eastern half of the existing bridge by encasing the iron columns in stone work and building segmental stone arches between them. These are to be 25 ft. high in the centre above Trinity high-water mark and 15 ft. high at the springing, which leaves a space of 7 ft. between the intrados of the arches and rail level.

In order to convince the powers that be that the proposals are reasonable, elevations of Waterloo and Westminster Bridges are submitted. The former has arches of 120 ft. span with elliptical arches, with height in the middle of 20 ft. 6 in. The latter has eight arches of spans varying from 120 ft. to 94 ft., and heights varying from 20 ft. to 15 ft. 6 in. The new arches will be of spans varying from 147 ft. to 140 ft., owing to the fact that there are no projections required next existing piers.

The spans and heights are ample, but the appearance from the bases of the new composite bridge, with its unequal spans and the weakness of the iron columns conspicuously emphasised by contrast with the new piers behind them, and the western half of the lattice bridge overhanging the stonework will be worse than it is at present.

The present time is perhaps hardly one in which to press for æsthetic considerations nor to hinder a railway company which is doing great national service in the perfection of its arrangements, which demand a fuller use of this bridge. At present it can only carry two trains at one time, and it is now felt to be necessary that it should be able to carry four trains at one time. But it is by no means clear that the work, which is estimated to cost £150,000, will be completed in time to be of use for the emergencies for which it is required, nor can we see why it should not be possible to entrain and detrain troops at the Waterloo Station by temporary arrangement with the London and South-Western Railway.

The outlay contemplated is not large, and possibly the extra ugliness achieved by it might hasten the removal of the bridge, but we think there is a much more urgent reason for opposition than that caused by the appearance of the bridge, and that is the fact that, despite the need for economy which will inevitably impede all such schemes, the necessity for a road bridge at Charing Cross is so great that any outlay now which would make its ultimate realisation more difficult should be opposed.

Waterloo and Westminster Bridges are inadequate at their best, and with weakening foundations and increased loads either may have to be closed at any time. This would throw extra work on the other, and the traffic obstruction would be insufferable.

We hope, therefore, notwithstanding all that can be said for emergencies, that this expense will not be sanctioned.

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ARCHITECTURAL SOCIETIES.

The Architectural Association of Ireland.

An ordinary meeting was held on Thursday, February 3, when Mr. R. M. Butler, F.R.I.B.A., read a paper on "The Gothic Revival and its Effects." Mr. H. G. Leask presided. The paper traced the revival of Gothic architecture, which had fallen into disuse for some hundreds of years, from its first beginnings, at a house commenced by Horace Walpole in 1753 and finished in 1770 at Strawberry Hill, which was rebuilt in "the Gothic taste," as it was then called, and explained some of the causes of the failure of the revival to re-create a living style of architecture such as existed in the Middle Ages, and referred to the influence it exercised upon modern architecture of the present day in these countries. Walpole's initiative set the fashion, and later the novels of Sir Walter Scott had no small share in popularising the taste for Gothic. The earlier churches and houses built in the style were mere travesties of mediæval art, as their designers were ignorant of its principles. The first important building in England built in this style was the Houses of Parliament at Westminster, designed by Sir Charles Barry in 1835, who was assisted in the design of the ornamental details by A. W. Pugin. It was one of the finest modern public buildings in Europe, and far and away the best erected by the British Government. Later, the influence of Pugin's writings, the great Exhibition of 1851, the publication of the works of John Ruskin, the Oxford Movement, and a variety of other causes led to Gothic becoming the dominant style of the mid-nineteenth century, eclipsing traditional English classical art, which had prevailed until well into the century. By 1850 Gothic was in full swing in England, and had been introduced into Ireland, and to doubt its superiority was considered evidence of bad taste; it was then deemed the only possible style for a Christian church. Gothic also came into vogue for secular purposes, but the modern version was an incongruous and artificial form of design, in that it neglected alike the traditional elements of the old domestic work and the conditions of modern times. The growing cheapness of foreign travel, the writings of Ruskin, and other factors brought about the introduction of foreign and exotic features, the taste for which rapidly developed, proving a wholly regrettable influence, which tended later to discredit the revival movement. The copyism and adaptation of mediæval architecture was carried out too literally and with too little regard for modern requirements and conditions. In the late "seventies" a change took place in England, the foundations of a fine school of domestic architecture, superior to that of any other country, were laid, and the ecclesiastical side of the movement took on a newer and more living character. The pioneers of this latter phase were the late J. D. Sedding, the architect of Holy Trinity Church, Chelsea, the late G. F. Bodley, R and J. F. Bentley, the architect of the Westminster Cathedral, who succeeded recovering a good deal of the quality of medi art, but adapted to modern needs. The w of this period in England might be descri as the best modern ecclesiastical work Gothic type in the world, although it could be said that the Gothic revival as a w had been a great success from the standp of the advancement of architecture. Gothic revival in Ireland followed on sim lines to that in England; it was not progres in character, but adhered to the early i and to the foreign influence which had d so much harm to English architecture be it was discarded in that country. The Go revival in Ireland had failed to create re great architecture, partly because of its en disregard of native Irish traditions in ar tecture, and by reason of the extent to wh it fell under English and foreign influ in the beginning. It was lamentable that effort was made to derive inspiration f the native remains. Nevertheless, some v creditable work was done. The lect referred to the difficulties under which Irish people laboured at the time the g church building era began in this coun and the absence of great mediæval traditi like those of England, although Ireland possess a distinct mediæval Gothic architect of its own. The Gothic revival had d relatively greater harm to the art of architect in Ireland, because it destroyed the class traditions that prevailed in the eightee and early nineteenth century, when the pu buildings and mansions of Dublin riva those of London, and set up nothing equ good. The lecturer finally described the and progress of the modern school of Got architecture in America, which has now reac an exceptionally high level. The m important churches and colleges in the Uni States are designed in this style, includ the immense work recently finished at West Point Naval Academy. The lecture illustrated by a large number of lantern vi of modern English and Irish churches, slides of American Gothic architecture, for the occasion by Mr. Ralph A. Cram, Boston.

On the motion of Mr. Beckett, seconded Mr. Lynch, a vote of thanks was passed to lecturer.

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FIFTY YEARS AGO.

A Self-Loading Ship.

M. DE CORAUX, a Lyonnese, has invent and constructed a ship which can load unload itself automatically in forty minut The captain and the mechanician are t only living crew on board, the working a manipulation of the vessel and cargo bei all performed by steam applied to m ingenious machinery. The loading is carri on by trucks and wagons, which can conta corn, flour, bales, cattle, horses, barrels, e The vessel is, as may be expected, of peculiar disposition; but its exterior bea all the signs of seaworthiness. The gre revolution is on the deck and in the interio The former is covered with lines of ra reaching from one extremity to the othe while, at midships, there are two turntable Front and rear are two or four immen cages, containing eight, twelve, or sixte wagons, of the same size as our railwa wagons. The rails on which the wago rest are adapted exactly to the rails of th deck. A cable is hooked to the wagon which traverse the deck throughout i length; and the stern of the boat havin been previously placed on a level with th quay, which is also furnished with rails, may be perhaps a portion of a terminu the wagons glide without the least interru tion from the vessel to the land, and *vi versâ.*

[*** We give the above extract from th *Builder* of February 17, 1866.—ED.]

CONSTRUCTION SECTION.

EMPORARY BUILDINGS FOR WAR PURPOSES:

II.—SUBSIDIARY POINTS OF IMPORTANCE.

BY T. P. BENNETT, A.R.I.B.A.

THE broad and important principles which must govern any scheme of temporary buildings have been set out in a previous icle, but after these have been settled there many things which must be borne in mind l which must receive careful consideration ore the buildings are satisfactorily complete.

'he elevations call for attention. In a manent building they call for primary ention, but in a temporary scheme they must e a place of distinctly secondary importance. is impossible, however, to ignore them gether, and the treatment of the detail will urally receive the attention of the architect. special features can be introduced—every t must be absolutely necessary to the icture—and it is only in the handling of ctical objects, general massing, and the use aint that originality can play its part.

well-proportioned building is extraordiily effective, and well-proportioned openings likewise of the greatest value. In the ign of many buildings the set conditions he problem dictate the general lines of the iposition, and several distinct classes of ldings will therefore be considered in turn.

n designs involving the housing of munitions kers or aliens in compounds the dining hut often the building of greatest importance, by reason of its prominence upon the eral plan it will attract attention. quently these buildings are 50 ft. wide and covered with a Belfast roof. In these cases unwise to introduce roof-lights, because by oing difficulty will be experienced in dealing the purlins. Ventilators should be placed ve the centre at intervals of about 25 ft. 0 ft., and should be constructed either with ies hung on centres or with louvres. This he only means of breaking the sky-line that be employed, as chimney-stacks will not t. Beyond the general lines of the buildings eaves and the windows are the only points ng any opportunity for treatment. The es may, however, be given a large projection, by this means produce an effective shadow, e a continuous band of windows between posts carrying the trusses is both logical attractive. The doors break the monotony ne front and may be made points of interest. etch for such a building is shown in Fig. 1. roof is covered with felt and the sides weather-boarding.

ffice buildings give rather more scope, use in many cases the arrangement of rooms allows a certain amount of latitude. ectangular building must be considered st a necessity, owing to the importance of and speed of construction, and too much ce cannot therefore be entertained. Lava- blocks should be connected to the main ling by a short corridor, as in hospital truction, or else built outside the main formed by the boundary of the principal s and entered by a door in one side By this means all the plumbing is accesfor repairs, and leakages from defects to hurried construction do not injure the unding structure. If such defects exist can, moreover, be seen and remedied. hard internal surface is required, it is cheaper to use 4½-in. brickwork rendered sides for the lower part of the sanitary wings than to employ brick nogging and plastering. The surface of the cement looks well when distempered cream colour or tarred, which will respectively be in contrast to or in harmony with a dark-stained weather-boarded building. The picturesque nature of these blocks is indicated in Fig. 2, as is also the hipped end to the roof, which was previously mentioned as desirable for the sake of stability. A plinth can be added where continuous sleeper walls are used by distempering or tarring the brickwork. All office blocks should have these sleeper walls, as they will otherwise be extremely draughty. Huts of a very temporary nature for munitions workers and others are weather-boarded down to ground level only and built upon piers. Housing schemes must likewise be planned upon a plain rectangular lay-out. Curves or unusual angles or a variety of designs and variations must be avoided. All of these things cause delay and expense, and, however desirable they may be from an artistic point of view, they should under no circumstances be allowed. Three or four types of buildings must be arranged and the whole of the dwellings must be made to conform to these types. Alterations should be made in colour and occasionally in material, but these alterations do not affect the general setting out and commencement of the work.

A plan and elevation of a block of buildings for such a scheme are shown in Figs. 3 and 4, and in this arrangement it will be noticed that sections containing any multiple of two houses can be erected with equal facility. By this means the whole length of a road can be set out from one group of dimensions. The angle houses are shown to be of two stories. This is permissible upon both architectural and practical grounds. The former needs no explanation, and for the latter it will be easily realised that in all factories there are a considerable number of leading hands and foremen, who demand, and rightly demand, a superior dwelling to that occupied by the ordinary workers. The angles of the roads are the best sites for these superior dwellings, and allow for the housing of foremen next to workers, where day and night shifts are worked. One set of men do not by this means disturb the others when they go on duty.

Disconnected blocks are preferable to continuous terraces from a hygienic point of view and for purposes of drainage. Brick stacks and fireplaces should be employed in dwellings, owing to the serious risk to human life which would occur in case of fire.

Weather-boarding is the most common and most effective material for the sides of all structures, and, as previously mentioned, is also the cheapest. Rebated weather boards should be employed in huts used as habitations. Sometimes the surface of the wood is left rough, but the knots make it unsightly. The best finish is given by two coats of carbolineum "Stop rot," or "Solignum." These materials can be obtained in many good colours; they are cheap and can be applied rapidly, and if necessary by unskilled labour. Wrot woodwork must be painted, but priming with red lead can be omitted, and "Duresco" used in its place. One coat of "Duresco" and two coats of lead and oil colour are sufficiently good for all purposes. Many colour schemes will suggest themselves, but white or battleship grey, coupled with brown boarding, is most effective, although dark green will look well in some situations. Brickwork is generally built with Fletton bricks, and in order to avoid its unsightly appearance it can be coated with tar or distempered. In the case of buildings constructed with 4½-in. walls reinforced with hoop-iron, and rendered inside, tar for the bottom portion and cream or yellowish paint or distemper for the upper half will give a delightful effect at a very small outlay. C.I. gutters and R.W.P.'s of light iron are used if iron is permissible, and are painted two coats. In certain buildings used for projectile factories lead and iron may not be employed, and in these cases wood "V" gutters are used and zinc or tinned metal R.W.P.'s.

The finish of the interior must next be the subject of consideration. Many buildings require no special lining, and the rough woodwork plaster, or brickwork is merely distempered. This applies to stores and factories, except those in which the walls must be dust-proof. For rooms which have to present a better appearance, 3-ply boarding was at the commencement of the war generally employed. The cost ran about 7s. 6d. per square for second quality, 3–4 mm. in good sizes. The price is now about 13s. 6d., and is becoming prohibitive. Three-ply is expensive to fix owing to the fact that it is necessary to insert nogging pieces to take the horizontal edges. Some of the substitutes are very absorbent, and will not stand rough wear, and for these reasons they are to be avoided. Matchboarding is the most satisfactory material and is easily obtainable. As it is covered by no patent it can be turned out from any mill, and this point is often of great importance. Uralite and other asbestos boards are to be preferred in places where fires are likely to occur, though the cost is somewhat in excess either of 3-ply or matchboarding For office linings, plaster slabs screwed to the studs make the best finish, and up to the present no difficulty has been experienced in obtaining large quantities. Nogging pieces must be inserted as in the case of 3-ply and Uralite to take the edges. Dust-proof buildings are lined with match-boarding covered with two coats of varnish.

The fireproofing of wood buildings requires consideration, and, as suggested above, it is necessary in some cases to line them throughout with Uralite. Certain other precautions should, however, always be taken, the first of these being the rendering of the roofing felt. Many of the felts employed are very liable to ignite if sparks fall upon them, and to guard against this they should be covered with a coating of cement grout laid on with a brush; ½ in. of cement rendering has been tried, but it is found that the sagging of the roof causes the cement to crack, the cracks hold water and cause the roof to leak. Asbestos sheets must be placed at the back of stoves, and sheet-iron or asbestos should be put for them to stand upon. Where sheet-iron stove pipes are employed they should be passed through a sleeve in the wall or roof made of a section of glazed earthenware pipe and filled with cement. Where the pipe passes through the wall immediately at the back of the stove, and the latter is likely to be heavily banked with coal, this precaution will be insufficient, and the partition must be built of brickwork or brick nogged for an area of about 2 ft. by 2 ft. around the pipe.

The surface of the studding where the buildings are used as offices or as private dwellings should be covered with lining felt before it is weather-boarded, in order to make the huts draught-proof, and to maintain an equable temperature.

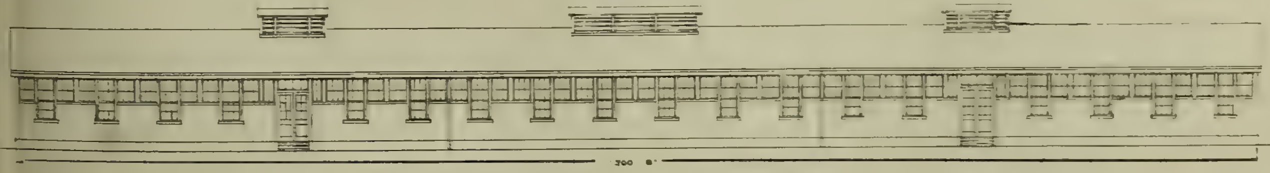


Fig. 1. Elevation of a Dining Hut.

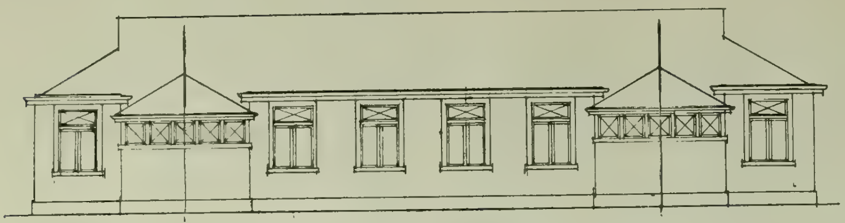


Fig. 2. Elevation of an Office Building showing Lavatory Blocks.

Heating in separate buildings of a maximum size of about 80 ft. by 20 ft. should be by means of a C.I. stove with a sheet-iron pipe passing through the wall at the side of the building, and carried above the roof. Larger buildings than this should be heated by means of a low-pressure hot-water system. If a central system is adopted, flues are avoided and the concentration of fuel and labour causes economical working when the buildings are in operation. Delay may be experienced in obtaining pipes and radiators, and these should therefore be ordered as soon as possible. Galvanised pipes are almost unobtainable.

The cost of the buildings varies enormously, and it is extremely difficult to give any figures which will be of value. As a basis, however, the following prices may be used. An office building, built with studding weather-boarding, boarded floors, boarded and felted roofs, and glazed steel skylights, the inside of walls and ceilings lined with plaster slabs, the whole complete with foundations, could be built for 4d. per foot cube six months ago for contracts larger than £10,000 on accessible sites. The cost at present would be about 4½d. This is exclusive of a railway or other special means of access. Measurements to be taken from the top of concrete to half-way up the roof. Buildings under £2,000, in different places, run, however, to as much as 8½d. per foot cube for exactly similar construction, so that some idea may be gained of the extreme range of prices that are received. The timber taken alone will cost from about 1d. to 1½d. per ft. cube of the building. This figure may be useful if the Government method of purchase is adopted, a system which, in spite of the adverse criticism it received twelve months ago, is proving one of the finest commercial transactions carried out for any Department since the commencement of the war.

With the question of cost is closely allied the question of saving either wisely or unwisely. The former may be considered first, and for the moment may be confined to questions of material and construction rather than to those of organisation and planning. Among points of permissible constructional saving may be placed the reduction of all scantlings. This may be made a very fruitful source of economy. Economy in the construction of floors may be secured in the case of hospitals by laying sheets of corrugated-iron upon wooden joists and covering the same with asphalt, the asphalt to be ½ in. thick over the top of the corrugations. By this means all the cost of filling and concrete is obviated. Interior woodwork in roofs can be wrot and coated with Solignum instead of being lined. The roofs and walls of stores are seldom lined and are generally distempered. Such a building, however, is very draughty. Doors may be 1½ in., windows devoid of mouldings. Architraves, 2½ in. by ¾ in. strips obtained very frequently from waste and off-cuts. Saving should not be effected in roof glazing, where it may leak and cause endless discomfort, unsightly water stains, and large amounts for subsequent repair. Patent systems executed by reliable firms should be employed if possible. If the conditions of the factory preclude the use of metal bars, wood must perforce be employed; but they should then be of substantial section and perfectly rigid. Cheap material or workmanship should never be allowed in gutters, and sanitary fittings should be plain solid patterns of reliable manufacture.

Ranges of lavatory basins may be obtained which have a channel cast as part of the fitting, or an open channel on the floor. In either case the use of several traps is obviated and a large amount of plumbing is saved.

Patent fittings and patent ventilators should be avoided as far as possible unless it is definitely known that a good stock is held and is immediately available.

The preparation of the drawings needs careful supervision, and they should be made so that they will fully explain the scheme, but do not contain unnecessary or elaborate detail. It is highly important that they should be well dimensioned and that the dimensions should be accurate. They should also be fully coloured in distinct colours, and if executed by a large number of draughtsmen they can be made look thoroughly workmanlike if one man d the whole of the printing. Walls and ot parts should never be blacked in.

Good prints can be obtained from pen tracings upon tracing-paper, and the letteri can be easily read if it is added in ink. It be necessary to make a set of drawings for e builder who is asked to tender and to send to his office.

A tender can be prepared for almost a temporary scheme in six days, and the w can be executed with great rapidity if it properly organised. Fifteen thousand poun worth of temporary offices, built in t blocks, have been erected ready for occupat in five weeks. A small store with an of attached has been completed in seven da the cost being £800; £50 of this was due speed alone.

Continuous Sunday work or long hours overtime are only means of wasting mo and should never be allowed unless two ga are employed. For extremely urgent w this is generally done, but for other cases th or four hours is the maximum continu

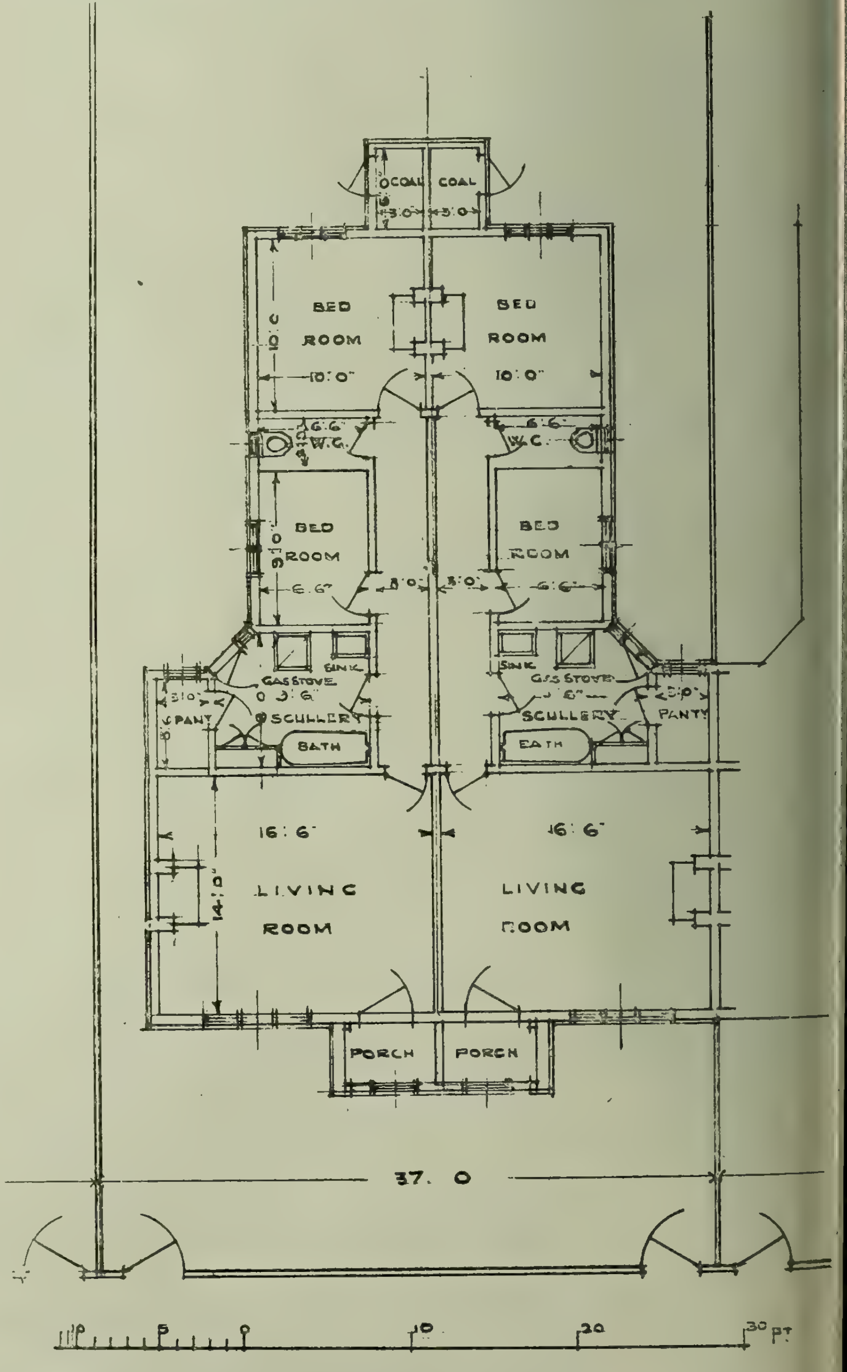


Fig. 3. Plan of Four Houses in a Scheme for Housing Munitions Workers.

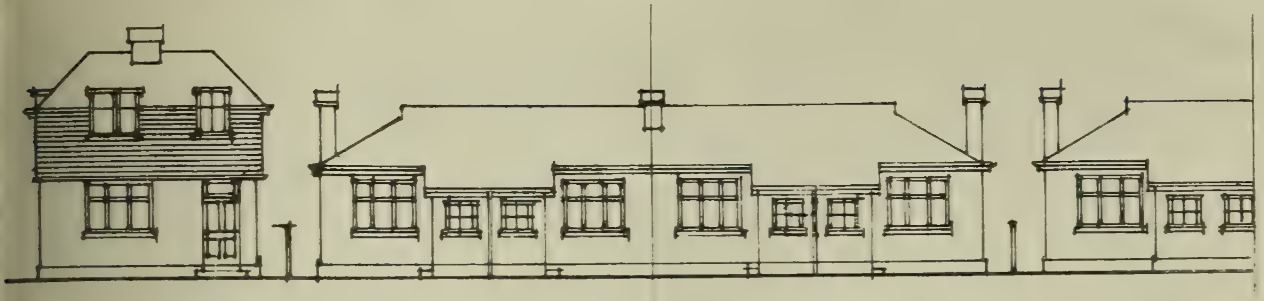


Fig. 4. Elevation of Part of a Scheme for Housing Munitions Workers.

ime that should be worked. Saturdays l be early days, and no Sunday work l be executed.

asional Sundays are, however, most ble and will not interfere with the output g the ensuing week. Penalties and ses require careful handling. It must be in mind that the users cannot move into tructure unless they have received due and have been able to make preparations. ierefore, the building is unexpectedly ed four or five days before it is due and contractor receives a large bonus, it is possible that it will remain unoccupied large portiòn of the time so gained.

easonably short time should therefore be and the contractor bound to his date, the tect doing everything in his power to No bonus should be offered and no ty enforced. There are, however, certain in which this rule will not produce the d result, and a bonus must then be d.

E ALBION MOTOR-CAR OMPANY'S NEW WORKS, COTSTOUN, GLASGOW.

E two buildings recently erected at toun, Glasgow, for Messrs. Albion Motor-ompany, Ltd., afford good examples of hops and stores built in reinforced ete.

first block was built in 1913, and is 200 ft. long, 60 ft. wide, and 60 ft. high. irst and second floors are used as stores, ere designed to carry a load of 3 cwt. per e foot. The third floor is used as a ne shop, and its construction is therefore r than that of those below. Access is ied to an adjoining building on the first by means of a small reinforced concrete , 40 ft. long and 10 ft. wide, which spans ered roadway.

second and newer building is 60 ft. from the older one, the intervening space roofed over to form a one-story building. concrete buildings are of the same over-all sions, but the construction of No. 1 is hat different from that of No. 2, the details ich are described in this article, as all the floors of No. 2 are devoted to workshops. Longitudinally the building is divided into ten bays by main columns about 20 ft. apart, and transversely into three bays of the same dimension. The site being near the River Clyde, it was found necessary to carry the foundations of the columns down to a depth of from 6 ft. to 8 ft. below the ground-floor level in order to reach a stratum of boulder clay which was estimated to withstand a pressure of 3 tons per square foot.

The cantilever beam foundation was adopted to avoid cutting through an existing concrete slab foundation of a brick wall, and also to prevent any extra load coming upon it. The wall being properly shored up, sheet piling was driven close to the existing foundation for a length somewhat longer than the new base, which is of oblong shape, to prevent the earth from falling away and letting the wall down when excavations were being made. After the base was cast a reinforced concrete cantilever beam was constructed, one end projecting 2 ft. 6 in. over the existing foundation to receive a column and the other end being tied down to a side column.

In another instance, where a concrete column happened to coincide with a steel stanchion of an existing building, two bases were formed 5 ft. from either side of column, columns were then brought up from them sufficiently high to clear the foundation of the stanchion, and a reinforced concrete beam 4 ft. deep and 20 in. wide was placed across, from which the new column is supported.

All the external columns are 18 in. wide on the face and 20 in. deep at the bottom, diminishing to 12 in. at the top, and are reinforced with Kahn rib bars and $\frac{3}{16}$ in. diameter binders.

The internal columns are of octagonal section, varying from 21 in. at the bottom to 10 in. at the top, and are reinforced with spirals and Kahn rib bars. The first, second, and third floors were designed to carry a superimposed load of 200 lb. per square foot, the slabs being 4 in. thick, secondary beams 18 in by 8 in. (three per bay of 20 ft.) and main beams 22 in. by 12 in.

The roof is designed to carry a load of $\frac{1}{2}$ cwt. per square foot, and the pitch is obtained by canting the beams and thickening the slabs; the latter are therefore 4 in. thick at one end and 5 in. at the other. Secondary beams are 16 in. by 6 in. (two per bay of 20 ft.) and main beams 20 in. by 9 in. The top floor is lighted from above by a glass lantern light carried on concrete trusses 10 ft. apart, the bottom ties being 16 in. by 6 in., posts 6 in. by 6 in., rafters 8 in. by 6 in., and ridge beam 14 in. by 6 in. The roof is waterproofed with asphalted felt.

Numerous holes 3 in. in diameter have been left in all the internal beams to permit cables, small pipes, and electric wiring to be drawn through and supported. These holes are below the neutral axis of the beam, and therefore do not theoretically weaken them.

The ground and first floors are used as fitting shops and are paved with granolithic. The three lines of benches that run longitudinally are served by a corresponding number of overhead runways, which are carried from the secondary beams by short lengths of angles bolted to them through holes formed of iron barrel, which were cast in with the beams.

The concrete was mixed in a mechanical mixer in the proportions of four parts of whinstone or granite chips, two parts of sand, and one of cement.

Building operations were commenced at the end of 1914, and completed about the middle of last year. The general contractors were Messrs. George Roome & Co., Ltd.

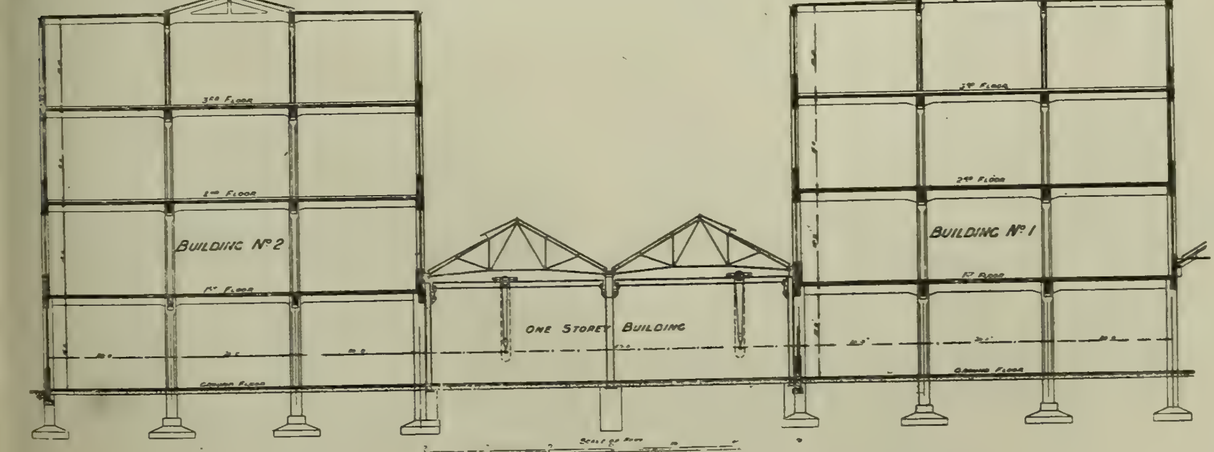
The whole of the reinforced concrete is executed on the Kahn system, and it was designed by the Trussed Concrete-Steel Company, Ltd., Caxton House, Westminster.

HARRIS ACADEMY, DUNDEE.

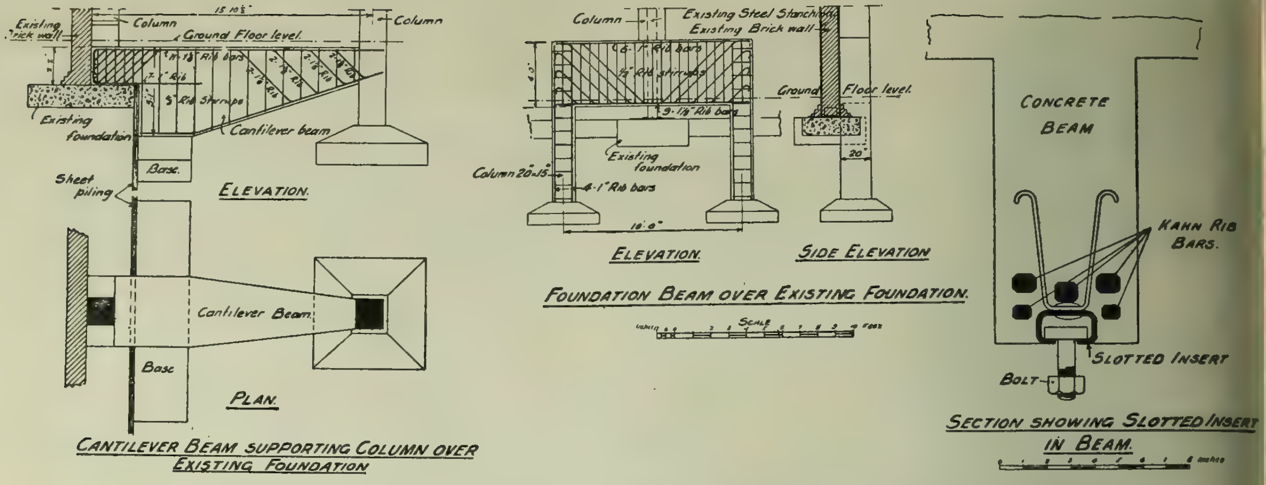
With reference to the plans of Harris Academy, which were illustrated in our last issue, the author of the accepted design is Mr. W. B. D. Keith, not Mr. A. W. D. Keith.

SCHOOL, MENAI BRIDGE.

A new elementary school was formally opened at Menai Bridge recently. The school stands a short distance from the town on the Llanfair road, and accommodation is provided for 292 mixed and infants. The architect was Mr. Joseph Owen.



The Albion Motor-Car Company's New Works, Scotstoun, Glasgow.



The Albion Motor-Car Company's New Works, Scotstoun, Glasgow. (*See page* 145.)

STANDARDISED ALL STEEL EMERGENCY BUILDINGS.

The war, while it has stopped many forms of building, has given an enormous impetus to others, and the makers of every form of temporary building have seen a practical proof of the old saying, "It's an ill wind which blows nobody good." Every kind of material which is used for temporary buildings has its advantages and disadvantages, and iron and steel have the great merit of being less liable to destruction and damage than lighter and more destructible materials. The Trussed Concrete Steel Company, of Central House, Kingsway, London, W.C., have devoted their attention to the perfecting of a system which is well adapted to emergency requirements, while at the same time the resulting structures are waterproof, strong, and wearable. Three men in four or five hours can put up a large hut, leaving it ready for immediate use. The units are formed of pressed steel, each 4 ft. by 7 ft. in height, and, unlike other systems, these plates are panelled so that they present a pleasing appearance and surface. The units are grooved, flanged, and slotted along their edges, so that an absolutely weathertight interlocking joint is formed with the next unit, while stability is ensured by an ingenious system of wedging, the roof trusses, of a simplified king-post form, with their braces, helping to keep the structure rigid throughout. Sheet steel forms the roof covering, the sheets being overlapped and interlocked in a way which provides watertightness.

Everything in connection with the huts except the flooring boards and posts is vermin and ant proof, and substitutes for wooden floors could be provided if required.

Skilled labour is not necessary either for erecting or pulling down the buildings, while the units can be packed in small compass, which renders them admirably suited for pioneering or campaigning purposes. Foundations are not usually needed, as sleepers are ordinarily sufficient, and if they should be wanted the roughest concrete sleeper walls would serve every purpose.

Doubtless such a system as we have described and illustrated in the photographs given provides just what is necessary in connection with the demands of war, while when the devastated regions of Europe have to be rebuilt such a system will meet special requirements of the time.

◆

NEW GOVERNMENT CONTRACTS.

War Office.

Apparatus, Warming, Hot Water.—G. N. Haden & Sons, Lincoln House, Kingsway, W.C.

Boilers.—Beech, Hill, & Co., Ltd., Gunslane Foundry, West Bromwich; A. Kenrick & Sons, Ltd., West Bromwich; T. Sheldon & Co., Spring Vale Foundry, near Wolverhampton; J. & J. Siddons, Ltd., West Bromwich.

Bolts and Nuts, etc.—Bayliss, Jones, & Bayliss, Ltd., Wolverhampton; F. W. Cotterill, Ltd., Atlas Works, Darlaston; J. Gadd & Sons, Ltd., Blackheath, Birmingham; T. Griffiths & Co., 69, Bilston-road, Wolverhampton; Hampton & Dean, King's-hill, Wednesbury; Horton & Son, Ltd., New Alma Works, Darlaston; A. E. Jenks & Cattell, Heath Town, Wolverhampton; J. C. Prestwich, Ltd., Atherton, Manchester; J. Wiley & Sons, Ltd., Eagle Works, Darlaston; W. M. Winn & Co., Station Works, Darlaston.

Buildings, Portable.—Humphreys, Ltd., Knightsbridge, S.W.

Cement.—Associated Portland Cement Manufacturers, Ltd., Northfleet, etc.; C. & T. Earle, Ltd., Wilmington, Hull.

Cisterns (Term Contract).—F. Braby & Co., Ltd., Ida Works, Deptford, S.E.

Cranes.—Bedford Engineering Company, Houghton-road, Bedford; Butters Bros. & Co., McLellan-street, Glasgow; Holt & Willetts, Lion Works, Cradley Heath; Morrison & Mason, Ltd., H.M. Dockyard, Portsmouth; T. Smith & Sons, Rodley, near Leeds; Stothert & Pitt, Ltd., Bath.

Engines, Oil.—Blackstone & Co., 81, Ca street, E.C.; Crossley Bros., Ltd., Open Manchester; Petters, Ltd., 73, Queen Vic street, E.C.

Engines, Steam Pumping.—Merryweat Sons, Ltd., Greenwich-road, S.E.

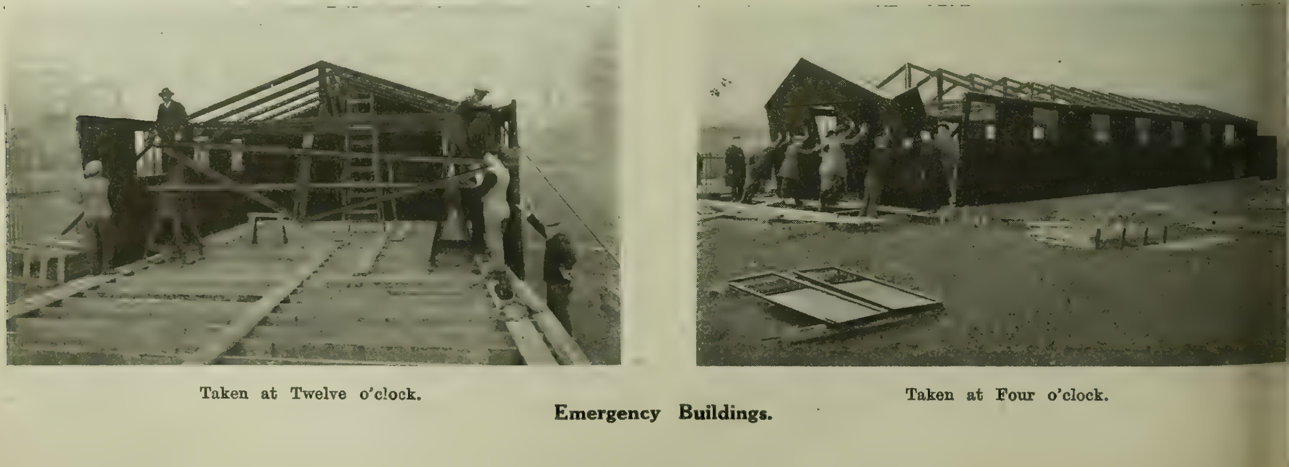
Ironwork, Tables, Forms, etc.—Bayliss, & Bayliss, Ltd., Wolverhampton; ingham Guild, Ltd., 45, Great Charles- Birmingham; J. Smellie, Ltd., Ivanhoe W Dudley; Old Hill Company, Old Hill, Sta

Paint.—L. Berger & Sons, Ltd., Hom N.E.; Brimsdown Lead Company, Brimsdown, Middlesex; Burrell & Co., West Ferry-road, Millwall, E.; Corn Chemical Company, Ltd., Stockport; B Cox & Co., Ltd., Grosvenor Works, Earl-s Westminster, S.W.; J. S. Craig & Co., 97, Portman-street, Glasgow; J. Foulg Sons, Seven Stars Alley, St. George-street Golden Valley Ochre and Oxide Company, Wick, Bristol; J. Hare & Co., Temple Bristol; T. Hill-Jones, Invicta Mills, Common-lane, E.; Jenson & Nicholson, Goswell Works, Stratford, E.; Mersey Lead Company, Ltd., Warrington; N Bros. (London), Ltd., Southall, Middl Pinchin, Johnson, & Co., Ltd., Silver E.; Rowe Bros. & Co., Ltd., Runcorn; S clyde Paint Company, Dalmarnock, Gla Wilkinson, Heywood, & Clark, Ltd., St Wharf, Poplar, E.

Screws and Washers.—F. Brady & Glasgow; Pryke & Palmer, 40–41, Thames-street, E.C.

Sheets, Corrugated, Steel.—Bowesfield Company, Ltd., Stockton-on-Tees; Burn Co., Liverpool; W. Gilbertson & Co., Pontardawe; J. Lysaght, Ltd., Br Pontnewynydd Sheet and Galvanised Company, Ltd., Pontypool, Mon.; Rave Plate Company, Ltd., Glanamman; J. Sum & Sons, Ltd., Hawarden Bridge Works, Sh Chester; Wolverhampton Corrugated Company, Ellesmere Port.

Tanks.—F. Braby & Co., Ltd., Ida W Deptford, S.E.; Braithwaite & Kirk, Bridge Works, West Bromwich.


Taken at Twelve o'clock.

Taken at Four o'clock.

Emergency Buildings.

THE BUILDING TRADE.

NORTH-WESTERN)ERATION OF BUILDING ADES EMPLOYERS.

ake the following from the January —

Apprenticeship Question.

g out of the Report and resolution National Federation on this question, een decided to recommend the Local ions to—Get into touch with the n authorities; co-opt members on the l Schools Committees; offer prizes to nical school classes; pay the school apprentices, and to keep an eye on hers' reports.

overnment and Wage Increases.

eliberations of the Government in the of securing national economy have e following statement being communi- y the Government Committee on ion to several trade unions imme- affected:—His Majesty's Government ven earnest attention to the financial of the country, to the great and g demands which will still be made resources to meet the needs of the war, the imperative need for economy in all f expenditure and consumption, both and private. They have also had o the general advances of wages that ready been given since the beginning ar, and to the measures already taken r limit the profits of undertakings. His s Government have come to the n that, in view of the pressing cy, any further advances of wages han advances following automatically isting agreements should be strictly to the adjustment of local conditions such adjustments are proved to be y. In conformity with this pronounce- e application of the joint shipyard or a wages advance of 15 per cent. ut the country has been refused by rd of Trade arbitrators.

cking and Bad Organisation on Government Works.

g out of correspondence with respect to acting of workmen by excess rates of and having been requested to give cases in support of the assertions made ng and bad organisation on Government the following have been sent up:— *ion Works, Blaydon-on-Tyne.*—Three joiners employed. Materials alto- adequate. Either too many men or supply of materials. Most of the employed to one-third their ordinary Of timber supplied, a considerable the best (redwood) split up by s with picks for firewood. Labourers to spread ashes. On finishing and what next, told to re-spread them. over a week on small patch of ashes.

Works.—One foreman had sixteen ers and seven labourers at work on of work. Average laying on straight- work 100 to 150 bricks per day told not to mind this, but wink at it. ,000 men at work, but 1,000 properly l would easily do what is being done.

on Camp.—Evidence furnished by a master builder who worked there x weeks. Arrived on job 7.10 a.m. re for charge hand. Not seen till ht o'clock. Put in a team of brick- long with a friend. No labourers. watch how other men worked and ork too fast. By noon had laid about bricks each. Taken off by foreman, that these two must set up two corners work two courses high only, and not any more. Reason given for moving that mates on previous job had complained of their rushing the work. The setting up of these two corners had to occupy that afternoon and all next day. On Saturday morning these men with ten other bricklayers put to a piece of work with not more than 100 bricks in hand, and told by foreman that they had to make them last till more came. No further supplies till Monday afternoon. In the meantime these men supposed to work, Sunday included, at double time. On a sewage section there sixty-nine bricklayers worked five weeks. This man says that at home, in normal conditions, he could have done the work in same time with six men.

Ripon Camp.—Evidence given by an influential trade unionist. A plasterer and labourer working together would do about 4 sq. yds. cement floating in a day. At home would have done more than this before breakfast. Many mixings of cement wasted, because of setting before the men would exert themselves to use it.

A Camp in Wales.—Told by foreman. Eight joiners boarding in a space where four were too many to work to advantage. Typical of the general conditions. Spars wanted 12 ft. long. Men set on to cut them by hand out of 20 ft. battens. Waste of material and labour.

Camp at Winchester.—Told by joiner. Many hundreds of new horse-cloths thrown on muddy ground for horses to exercise upon. Completely ruined.

BELFAST BUILDERS' ASSOCIATION.

The annual general meeting of this Association was held recently at 14, Arthur-street, Belfast, the President, Mr. R. B. Henry, J.P., in the chair. The Secretary, Mr. J. A. M'Auley, submitted the annual Report, which was unanimously adopted. It contained the following:—It is obvious that in the period under review no trade has been so greatly prejudiced by the war as our own, as the present is, of course, a most inopportune time for embarking on any building enterprise that can possibly be delayed. It is pleasing to record that the relationship between masters and men still continues good. There has been a great scarcity of labour during the period under review, accounted for by the departure of so many industrial workers to the war, and this had a very appreciable effect on the labour market. War bonuses at the *pro rata* rate of 3s. per week of fifty-four hours have been given to the carpenters and bricklayers, which pertains to the period ending May 1, 1916. The ground labourers and trades attendants have both received substantial increases to their wages during the year. The proposed alterations in the working hours of the various trades is at present under consideration. The membership of the Association remains unaltered.

AN ANNIVERSARY FUNCTION.

Mr. Edward Pollard, the well-known shop fitter, entertained a number of guests at the Holborn Restaurant on Friday, January 28, to commemorate the twenty-eighth anniversary of the day on which he started his business. Mr. Pollard, who is chairman of the company, took the chair, and read numerous telegrams of congratulation from those who have been associated with him in the firm and from other friends. In a subsequent speech he gave a brief sketch of his career from the time when he left home to look for a workshop at a rental of 10s. a week, to the present time. In the first year the average of wages paid was £15 a week, whereas in 1915 the wages bill of the firm was over £2,000 a week. He attributed his success to the help and sympathy received from the band of workers whom he had gathered together. "To work in a friendly way and to find happiness in work was the only thing worth working for, and he had found that nothing else paid so well. He believed in being on terms of good-fellowship with the humblest of the workers, and to encourage them to bring their difficulties to him, to work happily with them, and to let all share in any prosperity he had."

Mr. Barnes replied in a witty speech, in the course of which he said, "It was a wrong idea that men built businesses; they built themselves, if proprietors only gave them sufficient scope and elbow-room."

The proceedings terminated in the usual toasts, speeches, and expressions of goodwill to the firm and its directorate.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The Plans Committee of the T.C. has passed the following plans:—Alterations at Nos. 269-271, Union-street, for Messrs. Pratt & Keith, drapers, per Messrs. Kelly & Nicol, architects; picture house, Wales-street, for Mr. J. P. Kilgour, merchant, per Messrs. Sutherland & George, architects.

Athlone.—The L.G.B. has written to the R.C. intimating that they had recommended the Treasury to grant a loan of £1,300 for the provision of a new cemetery at Clonown, Athlone.

Barnoldswick.—At a recent meeting of the U.D.C., a letter was read from the C.C. with regard to the proposed joint smallpox hospital for the north-west portion of the West Riding, stating that the various authorities concerned had practically decided upon a united scheme, but the mode of apportioning the expense and cost of maintenance was still in abeyance.

Barrow.—The T.C. has passed plans for a new joiners' shop and general stores and saw mills for Messrs. Vickers; also for twenty-five houses and one house and shop in Victoria-road, for Messrs. Banks & Co.

Birmingham.—The Town-planning Committee of the Birmingham City Council has resolved to ask the City Council to sanction an application to the L.G.B. for leave to prepare an amending scheme for East Birmingham.

Bournemouth.—The B.C. has approved of the following:—Amended plan, premises, the Square, Messrs. Bobby & Co., Ltd.; additions, 402 and 404, Holdenhurst-road, the Parkstone and Bournemouth Co-operative Society; covered yard, Glenarm, Withermoor-road, Messrs. J. A. Parsons & Son; amended plan, seven houses, Green-road, Mr. A. Barnes; amended plan of house, Chessel-avenue, Messrs. J. & W. Hayward; motor and cart sheds, St. Paul's-lane, Messrs. H. Newman & Son; four maisonnettes, plots 36 and 37, Firbank-road, Messrs. J. & W. Hayward.

Bray.—The U.D.C. has approved plans submitted by Mr. M'Carthy, Surveyor, *re* baths.

Bridport.—The West Bay Committee has arranged for the area at the end of the esplanade to be metalled at a cost of £50.

Buckie.—The authorities for the Buckie Harbour extension scheme have been informed by the Treasury that they are willing to grant the application of the Buckie T.C. for variation of the conditions attached to the advance promised from the Development Fund and for a further loan for the completion of the harbour extension works. The additional cost sanctioned is £40,000.

California.—The House of Representatives has authorised an expenditure of $500,000 to equip

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* See also our list of Competitions, Contracts, etc., on page 150.

Mare Island, California, as a naval yard for the building of Dreadnoughts.

Carlisle.—The T.C. has adopted a revised scheme for providing thirty-six houses in Denton Holme under the Housing of the Working Classes Act, estimated to cost £10,684, an increase of £2,300 on the original estimate.

Dundee.—The following plans and sections of proposed new buildings, etc., in Dundee have been lodged at the office of the City Engineer:—Clepington-road (west), shed for Messrs. P. D. Mitchell, Ltd.; Crescent-street, extension of school for Dundee School Board; Dundonald-street, warehouse for Messrs. Malcolm, Ogilvie, & Co., Ltd.; Navarre-street, Barnhill, cottage for Messrs. James Tullis & Sons.

Dunfermline.—The District Committee has approved amended plan submitted by Mr. Gilbert T. Scott, architect, Inverkeithing, on behalf of the Hill of Beath Tavern Society, Ltd.; also plans submitted by Messrs. Smith & Watt, North Queensferry, showing proposed erection of temporary office at Ferrybarns.

Finchley.—Plans passed by the D.C.:—Revised junction of Addison-way and North-way, east of Eastholm, Addison-way, Co-Partnership Tenants, Ltd.; temporary buildings—Long-lane, near junction with Squires-lane, Mr. F. Fear; 2, Leopold-road, Mr. A. W. Cattle; Crescent-road, G.N.R. goods yard, Messrs. Eastwood & Co.; rear of Grand Hall, North Finchley, Ashby's New Halls; 53, Clifton-road, Mr. M. Groom; "The Laurels," High-road, North Finchley, De Dion Bouton, Ltd.; 22, Woodberry-grove, Mr. R. Ellwood.

Glasgow.—The following linings have been recently granted at Glasgow Dean of Guild Court:—Messrs. A. L. Meteorlite, Ltd., 106, Victoria-street, London, to erect a workshop at North Craigpark-street and Alexandra-parade; the Caledonian Railway Company, to convert existing booking office into a dwelling-house at Crow-road Station, Clarence-drive; Messrs. William Beardmore & Co., Ltd., to erect dining-rooms at Old Edinburgh-road; Messrs. Mechans, Ltd., Scotstoun Ironworks, Scotstoun, to erect a shed at their works in South-street and Balmoral-street.

Haynes.—The Beds. C.C. has accepted a tender for repairs to cottages, fences, gates, etc., at Haynes, for £44 15s. 6d.

Holmfirth.—The Council's Surveyor has received a plan of proposed new buildings at Kirkroyds, for Messrs. J. Holmes & Son.

Horbury.—The D.C. has approved plans of additional storage sheds at Horbury Bridge, for Messrs. J. Reid & Son, oil works; motor shed at Calder-grove, for Messrs. C. Marsden & Son, paper works; and of an electrical sub-station at Horbury Bridge, for Messrs. Elwand Smith & Co., mungo manufacturers.

India.—The scheme submitted by the Commissioners of the Howrah Municipality for providing drainage to a portion of that municipality has been approved by the Governor-in-Council.

London.—An application made, with plans, for the consent of the justices for the licensee of The Fountain, Mile End-road, to be allowed to carry out certain alterations has been granted. Application to alter the beerhouse, 79, Kirbey-street, Bromley, has been acceded to by the licensing justices.

Loughborough.—The T.C. has passed the following plans:—Coalhouse and stores, Knightthorpe-road, for the Primitive Methodist trustees; yarn shed, Rendell-street, for Messrs. H. E. Godkin & Co., Ltd.

Luton.—The T.C. has approved the following plans:—Four houses, Cavendish-road, Mr. F. Thomas; warehouse, Bury Park-road, Mr. W. J. Bolton; additions, Biscot-road, Commercial Cars, Ltd.

Lydney.—Plans for alterations of a villa at Woolaston, for Mrs. Ann Hawkins, have been approved by the R.D.C.

Macduff.—At a recent meeting of the T.C. a plan for a new motor garage, for Mr. J. T. Wilson, Manner-street, was remitted to the Plans Committee.

Madras.—Plans are ready for the construction of the new aquarium on the Marina on the site now occupied by the Lady Wenlock Park, Madras.

Marsden.—The New Buildings Committee of the U.D.C. has referred the plan submitted by Mr. Albert Schofield showing proposed conversion of stables into cottages to the Finance and General Purposes Committee.

Musselburgh.—Plans have been passed by Musselburgh Dean of Guild Court for the erection of a picture house immediately adjoining the Musselburgh United Free High Church to accommodate 1,054 persons. The promoters are the Central Picture House, Musselburgh, Company, Ltd., 104, West George-street, Glasgow.

Oldbury.—The U.D.C. has passed the following building plan:—Messrs. Shotton Bros., offices, Manchester-street.

Penzance.—The T.C. has accepted a tender for the building of the wall and making-up the new road, etc., to the new houses in connection with the housing scheme, at £167 11s. 6d.

Richmond (Yorks).—The T.C. has passed plans for the proposed lavatory in the Friary Grounds, and has given authority to the Executive Committee to carry out the work.

Shanklin.—The U.D.C. has approved a plan of alterations of a shop front in Shaftesbury-buildings, for Mr. R. Warder.

Sheffield.—An application is to be made by the Sheffield City Council for authority to prepare a "town plan" in respect of 142 acres of land comprising the area between the Eccleshall end of Psalter-lane, Nether Edge, and Brincliffe.

Silsden.—The U.D.C. has approved the plan of Mr. T. Green's sheep dipping shed at Brunthwaite; also the plan of the Silsden Dyeing Company for petrol store.

Skelmanthorpe.—The D.C. has passed plans submitted by the executors of the late Mr. John Senior for the conversion of a shop into a dwelling-house; also plans of a washhouse submitted by Mr. Outram in Spencer-street.

Spain.—Royal Assent has been given to the proposals of the "Dirección General de Obras Públicas" for the distribution of the sum of 9,000,000 pesetas (about £360,000) among the various provincial authorities in Spain, with a view to carrying out, by contract, necessary road improvement works during the current year.

Stafford.—On the recommendation of the Electricity Committee, the T.C. has agreed to make application to the L.G.B. for their sanction to the raising of £12,000 for extensions to the electricity works.

Stokesley.—The R.D.C. has approved of a plan from Mr. M. Dodds of two dwelling-houses proposed to be built in Kirby-lane, Great Broughton.

Sutton-in-Ashfield.—At a recent meeting of the U.D.C. the following plan was recommended to be passed:—Stable, washhouse, etc., in Fox-street, for Mr. Arthur Searson.

Swindon.—The following plans have been approved by the T.C.:—Messrs. F. & T. Affleck, lavatories, Prospect Works; Messrs. Bridgman & Bridgman, reconstruction of premises for Messrs. Lennards, Ltd., 80, Regent-street; Mr. A. Mortimer, rebuilding and extending shed, Rayfield-grove; Messrs. Green & Marsh, brick shed, rear of 21, Commercial-road.

Teesdale.—The L.G.B. has approved the proposal of the Guardians to allow a strip of the Workhouse ground to be given to the U.C. of Barnard Castle for the widening of the road.

Watford.—Plans approved by the U.D.C.:—For alteration to Derby House, High-street; for three houses in Sussex-road, for Mr. Weller; new store for Messrs. W. & D. Wilkins, attached to proposed fish shop, Queen's-avenue.

West Lancashire.—Plans of proposed sewage purification works, Bartlett Home for Epileptics, Maghull, and of proposed workshop, Guide-road, Hesketh Bank, for Mr. George Dawson, have been approved by the Council.

Weston-super-Mare.—The Burial Board Committee of the U.D.C. has considered the proposals of the Surveyor for laying out the lands acquired for burial purposes, and have instructed him to proceed with the preparation of the plans accordingly.

GENERAL BUILDING NEW

NEW WORKMEN'S DWELLINGS, LIMPSFIE

The Godstone Rural District Council completed their scheme for the provisio workmen's cottages at Limpsfield. cottages are built in three blocks in cre form, the central block of four standing about 80 ft. from Redlands-lane, and two blocks of three each at either side. The and chimneys are of local brick, exter plastered above the plinth. The cottage roofed with plain tiles, the outbuildings covered with "Ruberoid." Each cottage tains—On the first floor, bedroom 13 ft. by 10 ft., a second room 10 ft. by 9 ft., room 7 ft. 8 in. by 7 ft. 3 in. On the gr floor, living-room 13 ft. 9 in. by 12 ft., scu 13 ft. 9 in. by 7 ft., larder, coal cellar, w closet, and covered shed 10 ft. by 5 ft. cottages were erected from the designs o T. C. Barralet, M.R.S.I., Surveyor to Council. Mr. A. Brasier, of Limpsfield, contractor for the buildings, and Mr Morgan, of Oxted, for the drainage w The cost of the former is about £1,900, an latter about £200.

TRADE NEWS.

Boyle's latest patent "Air-pump" v lators have been adopted for the Cinem Tidworth.

The additions to Messrs. Ferranti's neering Works, Hollinwood, are ventilated by means of Shorland's ex roof ventilators, supplied by Messrs. Shorland & Brother, Ltd., of Failsw Manchester.

Messrs. Harry Hems & Sons, ecclesia art works, Exeter, in announcing the dea the head of the firm, the late Harry state that the business will continue carried on by his sons, who for many have been associated with their father work.

The balconies at the new Chelsea Ho for Women have been constructed with Pu cement concrete.

WAGES IN THE BUILDI TRADE.

London.—The London Master Bu Association has received communications the Operatives' Societies with regard to and conditions in this district. In eac notice is given to terminate the working in six months from the date of such and the following alterations are propos Bricklayers (14–1–16). Rule 2—Add " possible one hour for dinner, and lea 5 p.m." Rule 3—Delete 11½d. per ho insert 1s. 1½d. per hour. Rule 4—Delet request of the employer" and insert

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ised starting time next day." *Re* Night —Delete "From Saturday midnight to y midnight, double time," and insert n Saturday, 4 p.m., to starting time on ollowing Monday shall be treated as y work." Rule 13—Delete the rule. 14—Delete the rule. Wood Cutting nists (15–1–16). Rule 3 be rescinded, the following inserted in its place: imum rates of wages shall be paid as ade—Elephant, spindle, four-cutter, and moulding machines, 1s. 1d. per hour. ing machines. 1s. 0½d. per hour. Planing ther machines not here specified, 1s. per Circular and frame saws, 11½d. per Saw-sharpening and tool-making, l. per hour. Marking and cutting-out, l. per hour." Smiths and Fitters (15–1–16). 3—To read, "That the rate of wages for and fitters in the London district shall s. per hour." Labourers' Societies -16). Rule 3—To read, "That the rate ges for all labourers, except apprentices nprovers, engaged on building works to be er hour; scaffolders and timbermen, 10½d. our." Stonemasons (17–1–16). Rule 3— the present rule and insert. "The rd rate of wages to be 1s. 1½d. per hour anker masons and machinists; masons and granite masons, 1s. 2¼d. per hour." 4—Delete the words, "Overtime when d at the request of the employer" and "That no overtime be worked except in of necessity, and when this is likely to ue more than two consecutive nights, rm affected to communicate with the t Secretary explaining the reason, and nsent or otherwise to be final." Overtime worked shall be paid, etc., and add, ble time shall be paid for *ante* time both winter and summer months." 5—Delete the word "at" and insert after the words, "All tools to be ned." Rule 6—Delete the words "1s. 6d. orking day" and insert "2s. 6d. the first s. for two days, 7s. 6d. for three days, maximum of 12s. per week." Rule 8— "That on all jobs provision be made ers and fitters, so that in case of inclement er no stoppage of work shall take place." proper shop accommodation be provided banker masons, and where such shops t provided and time is lost by masons h inclement weather, the employer to alf wages for such lost time. No shop to s than 12 ft. in height and a minimum of 4 ft. between bankers. Rule 13— the whole of present rule. Rule 14— the whole of present rule and insert new follows: "Should any dispute arise in tion with these rules, the same shall be with in accordance with the scheme of National Conciliation Board for the ng Trades." New rule—"Worked stone come into the area over which these operate from any district where the rd rate of wages is below the current aid in this area, except plain York steps nplates." New rule—"No piecework or ntracting for labour only shall be allowed these rules." Plasterers (17–1–16). —The Secretary writes, "I am instructed Committee to give the London Master rs six months' notice to date from ry 17, 1916, for an advance of of twopence per hour for the n Plasterers." Carpenters and Joiners' ies (29–1–16). Rule 3—That the um rate of wages shall be 1s. 1d. per Rule 4—That the words, "When d at the request of the employer" after st word "overtime" be deleted. After ords "Double time" be inserted "until ecognised starting time next morning." the words "Christmas Day" be inserted all Bank Holidays." That 2d. extra our be paid for night work, instead of d. extra as at present. Rule 5—That be deleted and insert "36." Rule 6— y money, that "1s. 6d." be deleted, and "2s. 6d." Rules 13, 15, and 16 be l. A demand for an immediate increase ges presented in April, 1915, was refused. resent request is made in a more consti- al manner, inasmuch as the notice for ions is given in accordance with the ng Rule Agreements.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9	8½	7½	7½	7½
Barrow-in-Furness.	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	[illegible]	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	8¾	8½	8½	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5½	5½	5½
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10½	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10	10	10	8½	7½	7½	7½
Leicester	10½	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne.	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8¼	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½*
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9¼	9½	—	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10	10½	9½	10	9¼	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6½	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9½	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk *) are advertised in this number:** Competitions, —; Contracts, iv., vi., viii.; Public Appointments, xviii.; Auction Sales, xx. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

February 19.—**Seascale.**—House.—For the brick and mason work, slating, and plastering and plumbering work in the erection of a house at Seascale. Plans, etc., of Mr. James Tyson, The Glen, Seascale.

February 21.—**Whitley Bay.**—Painting, etc.—Painting and decorating the interior of the Council Offices and caretaker's house, Council-buildings, Whitley Bay, for the Whitley and Monkseaton U.D.C. Specification, etc., of Mr. A. J. Rousell, A.M.Inst.C.E., Council's Surveyor, Council Offices, Whitley Bay.

February 24.—**Salford.**—Alterations.—For alterations to Gas Meter Testing Office. Particulars from Borough Engineer, Town Hall, Salford.

February 26.—**Abertillery.**—Flooring.—For new flooring at the Powell's 'Tillery Institute, Abertillery, for the Trustees and Committee. Particulars from Mr. F. R. Bates, architect, 30, Commercial-street, Newport.

February 28.—**Beverley.**—House and Cottages.—For the erection of new foreman's house and two cottages at High Eske Farm, near Beverley. Plans, etc., of Mr. R. H. Whiteing, architect, No. 3, Ladygate, Beverley.

* March 2.—**Cardiff.**—Alterations and Additions.—Tenders are invited for alterations and additions to Messrs. Cory Brothers & Co.'s premises.

FURNITURE, MATERIALS, etc.

February 19.—**Burton-upon-Trent.**—Granite, etc.—Supply to the B.C. of the undermentioned materials for six or twelve months from March 31, 1916:—Broken granite, granite setts and kerb, lime, stoneware pipes, bricks, cement, etc. Forms of tender of Mr. George T. Lynam, Borough Engineer and Surveyor, Town Hall.

February 19.—**Rathmines.**—Materials.—Supply to the Rathmines and Rathgar U.D.C. of builders' materials for the year ended March 31, 1917. Tender forms can be obtained at the Surveyor's Office.

February 21.—**Antrim.**—Materials.—Supply to the Asylum Committee of plumbing materials, paints and oils, timber. Tender forms from the Clerk of the Asylum, Holywell, Antrim.

February 22.—**Hoylake.**—Materials.—Supply to the U.D.C. of Hoylake and West Kirby of builders' materials for the year ending March 31, 1917. Specifications, etc., of the Engineer and Surveyor to the Council, Town Hall, Hoylake.

February 22.—**London.**—Painters' Colours, etc.—Supply to the Metropolitan Asylums Board of painters' colours, oils, etc. Forms of tender can be obtained at the Office of the Board, Embankment, London, E.C.

February 23.—**Bury.**—Materials.—Supply to the Gas Committee of builders' materials for the period April 1, 1916, to March 31, 1917. Forms of tender, etc., can be obtained at the Gas Works, Elton, Bury.

February 23.—**London.**—Materials.—Supply to the Council of the Borough of St. Marylebone of builders' materials for six months from April 1, 1916. Tender forms, etc., may be obtained on application at 19-20, York-place, Baker-street, W.

February 24.—**Dorchester.**—Materials.—Supply to the T.C. of builders' materials. Form of tender, etc., of the Borough Engineer, 21, North-square.

February 28.—**Dundee.**—Materials.—Supply to the Tramway Committee of the Corporation of builders' materials for one year from May 16, 1916. Specification, etc., of Mr. Peter Fisher, General Manager, Tramway Office, Dundee.

February 28.—**Ealing.**—Materials.—Supply to the T.C. of builders' materials. Forms of tender, etc., of the Borough Surveyor, Mr. W. R. Hicks, A.M.Inst.C.E., Town Hall, Ealing, W.

February 28.—**Gravesend.**—Builders' Materials.—Supply to the T.C. of builders' materials for one year from April 1 next. Conditions of tendering, etc., at the office of the Borough Treasurer, 4, Woodville-terrace.

February 28.—**Maesteg.**—Materials.—Supply to the U.D.C. of builders' materials for six months. Conditions of contract, etc., of Mr. Samuel J. Harpur, the Surveyor to the Council, Council Offices, Talbot-street, Maesteg.

February 28.—**Spenborough.**—Granite, etc.—Supply to the U.D.C. for the year ending March 31, 1917, of granite and tarred slag, cement, stoneware pipes, kerbs and setts, tar, pitch, and oil. Forms of tender, etc., of Mr. John H. Linfield, Clerk to the Council, Town Hall, Cleckheaton.

February 28.—**Whitefield.**—Granite, etc.—Supply to the U.D.C. of granite macadam, setts, chippings, kerbs, flags, earthenware pipes, ironwork, etc., during the year endng March 31, 1917. Forms of tender, etc., of Mr. George M. Denton, Engineer and Surveyor, Council Offices, Whitefield.

February 29.—**Woodford.**—Granite, etc.—Supply to the U.D.C. for the year ending March 31, 1917, of broken granite, limestone chippings, tar, pitch, and creosote oil, gravel, hoggin, and sand. Forms of tender of Mr. William Farrington, Surveyor to the Council, Council Offices, Woodford Green.

March 1.—**Droylsden.**—Chippings, etc.—Supply to the U.D.C. for the period ending March 31, 1917, of chippings, pitch, cement, brickwork for graves, lime. Forms of tender, etc., on application at the Council Offices, Droylsden.

March 2.—**Bedwas (Mon.).**—Materials.—Supply to the Directors of the Bedwas Navigation Colliery Company, Ltd., of builders' materials during twelve months from April 1, 1916. Contract forms of Mr. Griffith Morgan, Secretary, Registered Office, Bedwas Navigation Colliery Company, Ltd., Bedwas, Mon.

March 2.—**Bolton.**—Materials.—Supply to the Electricity Committee of the Corporation of builders' materials for the year ending March 31, 1917. Specifications, etc., of Mr. W. J. H. Wood, Borough Electrical Engineer, Back o' th' Bank, Bolton.

* March 7.—**London.**—Materials, etc.—The Metropolitan Water Board invite tenders for supply of various stores and execution of work for a period of one year.

ENGINEERING, IRON, AND STEEL.

February 28.—**Coventry.**—Cast-iron Pipes, etc.—Supply to the Waterworks and Fire Brigade Committee of the Corporation of cast-iron pipes, lead pipes, solder, hydrant and valve boxes, etc., for the year ending March 31, 1917. Forms of tender, etc., of Mr. J. E. Swindlehurst, Water Engineer, St. Mary's Hall.

February 29.—**London.**—Driving Wheel Tyres, etc.—Supply to the London County Council of forge steel driving wheel tyres and forged steel trailing wheel tyres. Form of tender, etc., from the Chief Officer, London County Council Tramways, 62, Finsbury-pavement, E.C.

ROAD, SANITARY, AND WATER WORKS.

February 19.—**Bedford.**—Broken Granite, etc.—Supply to the Bedfordshire C.C. of broken granite, slag, flints, gravel, and for the cartage of road materials. Forms of tender, etc., of the County Surveyor, Shire Hall, Bedford.

February 19.—**Marshland.**—Granite.—Supply to the R.D.C. of granite. Forms of tender of Mr. R. W. Faircloth, Clerk to the Council, 2, Ely-place, Wisbech.

February 19.—**Southborough.**—Basalt, etc.—Supply to the U.D.C. of about 700 tons of basalt, granite, or other suitable stone, to be broken not to exceed 1½-in. gauge. Forms of tender, etc., of Mr. Philip Hanmer, Clerk to Council, Council Offices, Southborough.

February 22.—**Salford.**—Sewering, etc.—For sewering and flagging works. Particulars from Borough Engineer, Town Hall, Salford.

February 23.—**East Stow.**—Sewer, etc.—For 700 ft. extension of 9-in. sewer, together with manholes, ventilating shaft, etc., in the parish of Stowupland, for the East Stow R.D.C. Plans, etc., of Mr. Henry E. Wilkes, Clerk to Council, Market-place, Stowmarket.

February 23.—**Hull.**—Sewering, etc.— sewering, draining, levelling, paving, and ing in the back road behind Nos. 111 to Prince's-avenue, and the back road behind 501 to 507, Anlaby-road, for the Corpora Forms of tender, etc., of Mr. F. W. Brick City Engineer, Guildhall, Hull.

February 26.—**Church (Lancs.).**—Limes Chippings, etc.—Supply to the U.D.C. of following materials for the year ending Marc 1917:—Limestone chippings, lonkey setts, coke; also for tar spraying a portion of Dill lane, area about 8,000 sq. yds. Forms of te etc., of Mr. Fred Howarth, A.M.Inst. Surveyor, Church.

February 26.—**Middleton.**—Macadam, e Supply to the Corporation of macadam, locks, setts, curbs, flags, cement, pipes, etc the year ended March 31, 1917. Mr. Fred Entwistle, Town Clerk, Town Hall, Middleto

February 26.—**Wisbech.**—Granite, e Supply to the R.D.C. of granite, ironstone, gravel, and ragstone. Forms of tender of Highway Surveyor for the North District, A. G. Catling, 4, Post Office-lane, Wisbech.

February 28.—**Blyth.**—Broken Slag.—Su to the Blyth and Cuckney R.D.C. of best b slag for roads. Forms of tender, etc., of Frederick Hopkinson, Surveyor, 81, Br street, Worksop.

February 28.—**Castle Ward.**—Road Mater —For supplying, quarrying, breaking, lea and laying-on materials required for the se highways in the district from April 1, 191 March 31, 1917; also for supplying broken stone, for the R.D.C. Forms of tender, from the Surveyor, Mr. David Hope, Pontel

February 28.—**Coventry.**—Road Stone, Supply to the Corporation of the follo materials during the year ending Marcl 1917:—Broken road stone, broken slag, gr kerbs, granite setts, stoneware pipes, cast workmen's tools. Form of tender, etc., of J. E. Swindlehurst, City Engineer and Surv Saint Mary's Hall.

February 28.—**Hastings.**—Tar.—Supply t Corporation of 70,000 gallons of refine distilled coal tar or tar compounds for su treatment of roads. Tender of Mr. P. H. Pa M.Inst.C.E., Borough Engineer, Town Hastings.

February 28.—**Penarth.**—Limestone, Supply to the U.D.C. of mountain limes road metalling, and gravel, and basalt or gr gravel, up to March 31, 1917. Forms of te etc., of Mr. Edgar I. Evans, A.M.Inst. Surveyor, District Council Offices.

* March 6.—**Kensington.**—Sewers Cons tion.—The Royal Borough of Kensington i tenders for construction of certain sewers w the Borough.

No Date.—**Gainsborough.**—Road Me Supply to the R.D.C. of about 7,000 to whinstone and about 600 tons of slag. Spe tions, etc., of Mr. Richard Maxwell, Surv Lea-road, Gainsborough.

No Date.—**Yeadon.**—Road Materials.—S to the U.D.C. of road materials for the ending March 31, 1917. Forms of tender o N. Houlden, Surveyor to the Council, Town Yeadon.

Public Appointment.

* February 29.—Assistant Instructor I craft.—The L.C.C. invite applications fo above temporary post.

Auction Sales.

* February 29.—**Hammersmith.**—Mr. F Smith will sell by auction, on the premise stock, plant, and machinery of a builder tractor, and saw mill proprietor.

* February 29.—**Sutton.**—Messrs. Mo Baines, & Clark will sell by auction, o premises, a quantity of old building mater

* February 29.—**Upper Norwood.**—M Wootton & Son will sell by auction, o premises, a quantity of ironmongery, etc.

[Those with an asterisk (*) are advertised in this issue]

ICES CURRENT OF MATERIALS.

wing to the exceptional circumstances which vail at the present time, prices of materials uld be confirmed by inquiry.]

ince our last issue sheet lead and white and red lead been increased, and several other prices altered.—Ed.

Our aim in this list is to give, as far as possible, the age prices of materials, not necessarily the highest owest. Quality and quantity obviously affect prices fact which should be remembered by those who e use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
t Stocks	2 0 0
ced Stocks for Facings	2 12 0

Per 1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
tons	1 10 0	Best Blue Pressed Staffordshire	4 14 0
t Fareham ed	3 12 0	Do. Bullnose	4 18 6
t Red Pressed uabon Facing	5 5 0	Best Stourbridge Fire Bricks	4 14 0
zed Bricks—			
st White,		D'ble Str'tch'rs	17 17 6
ory, and		Double Headers	14 17 6
alt Glazed			
tretchers	12 7 6	One Side and two Ends	18 17 6
ders	11 17 6	Two Sides and one End	19 17 6
ins, Bullnose nd 4½ in. lats	15 17 6	Splays and Squints	17 7 6

Second Quality £1 per 1000 less than best.

	s. d.	
mes Ballast	7 9	per yard, delivered.
mes and Pit Sand	8 0	„ „ „
t Washed Sand	9 0	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
t Portland Cement	2 5 0	..	2 8 0

o. £2 1s. alongside in 80-ton lots.
rocrete 2s. 6d. per ton extra on above.
t Ground Blue Lias Lime.... 1 3 6 at rly. depôt.
e.—The cement or lime is exclusive of the ordinary charge for sacks.
y Stone Lime .... 17s. 0d. per yard delivered.
urbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
h Stone—delivered in railway trucks at estbourne Park, Paddington, G.W.R., or outh Lambeth, G.W.R., per ft. cube	1 7
do. delivered in Railway trucks at Nine lms, L. & S.W.R., per ft. cube	1 8¾
do. delivered on road waggons, Nine Elms epôt	1 9¼
tland Stone—	
rown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W., per ft. cube	2 5½
o. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depot, per ft. cube	2 6½

hite Basebed, 2d. per ft. cube extra.

ndom Blocks—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
aster in blocks	2 0	Closeburn Red Freestone	2 2
r in blocks	1 7¼		
nshill in blocks	2 4	Red and White Mansfield Random block	2 9
rley Dale in locks	2 5	Yellow Magnesian Limestone do. do.	3 3

rk Stone—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
ppled random blocks	3 4
Per Ft. Super., Delivered at Railway Depôt.	
n. sawn two sides landings to sizes (under 0 ft. super.)	2 5
. rubbed two sides ditto, ditto	2 8
in. sawn two sides slabs (random sizes)	1 0½
. to 2½ in. sawn one side slabs (random sizes)	0 8¼
in. to 2 in. ditto, ditto	0 6¾

rd York—

Per Ft. Cube, Delivered at Railway Depôt.	
ppled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
. sawn two sides landing to sizes (under 40 ft. uper.)	2 3
. rubbed two sides ditto	2 7
. sawn two sides slabs (random sizes)	1 0
. self-faced random flags	0 5

TILES.

Per 1000 f.o.r. London.

	£ s. d.
t machine-made tiles or hand-made sand-aced tiles from either Broseley or taffordshire district	2 12 6
namental ditto	2 15 0
and valley tiles (per dozen)	0 5 6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£ s. d.
t Blue Bangor slates, 20 by 10	11 16 0
st quality „ „	11 10 0
„ „ 16 by 8	5 15 0
t Blue Portmadoc, 20 by 10	11 13 6
st quality „ „	11 3 6
„ „ 16 by 8	5 15 0

WOOD.

st Building Redwood.

Imported sizes.	Per standard. £ s. d.		£ s d.
ls: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	28 10 0	..	29 10 0
in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	27 10 0	..	28 10 0

WOOD (*Continued*).

Best Building Redwood.	Per standard. £ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	23 10 0	..	24 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0		more than battens.
¾ in.	1 0 0		more than battens.
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best.
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 8 10 0	..	—
Seconds do. do.	8 0 0	..	—
9 in. to 10 in. do.	7 0 0	..	—
6 in. to 8 in. do.	6 10 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	10 0 0	..	11 0 0
Do. 6 in. to 10 in.	8 0 0	..	9 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Rio do.	23 0 0	..	25 0 0
Under 2 in. thick	0 10 0		extra.

Joiners' Wood.

White Sea First Quality Red: 4 in. by 11 in.	35 0 0	..	36 0 0
3 in. by 11 in., and 2 in. by 11 in.	34 0 0	..	35 0 0
4 in. by 9 in.	33 0 0	..	34 0 0
3 in. by 9 in., and 2½ in. by 9 in.	32 0 0	..	33 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	24 0 0	..	25 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Seconds quality	2 0 0		less than best.
Third quality	£2 to £3		less than seconds.
Archangel White Deals— Best 3 in. by 11 in.	28 0 0	..	29 0 0
3 in. by 9 in. and 10 in.	26 0 0	..	27 0 0
Seconds, do.	1 10 0		less than best.
U.S. Battens	19 10 0	..	20 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 7 in. planed and shot	1 8 6	..	1 13 0
1¼ in. by 7 in. planed and matched	1 9 0	..	1 13 0
1 in. by 7 in. planed and shot	1 3 0	..	1 6 0
1 in. by 7 in. planed and matched	1 3 0	..	1 7 6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0 18 0	..	0 19 6
1 in. by 7 in. do.	1 3 0	..	1 5 6
⅝ in. by 7 in. do.	0 14 0	..	0 15 0
	Per standard.		
Columbian or Oregon Pine, best quality	35 0 0	..	40 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		„
Seconds, regular sizes	43 10 0		„
Oddments	37 10 0		„
Kauri Pine—Planks per ft. cube	0 7 6	..	—
Oak Logs— Large, per ft. cube	0 6 0	..	0 6 6
Small „ „	0 5 0	..	0 5 6
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super, as inch	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 5 0	..	21 5 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

METALS (*Continued*).

	Per ton, in London. £ s. d.		£ s.
Iron— Common Bars	15 10 0	..	—
Staffordshire Crown Bars, good merchant quality	15 10 0	..	16 10 0
Staffordshire "Marked Bars"	17 0 0	..	17 10 0
Mild Steel Bars	16 10 0	..	17 0 0

Steel Bars, Ferro-Concrete quality, £17 10s. basis price.

Hoop Iron, basis price	18 10 0	..	19 0 0
„ „ Galvanised	30 0 0	..	35 0 0

(* And upwards, according to size and gauge.)

Sheet Iron Black— Ordinary sizes to 20 g.	18 10 0	..	19 0 0
„ „ 24 g.	19 10 0	..	20 0 0
„ „ 26 g.	20 10 0	..	21 0 0
Sheet Iron, Galvanised flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	29 10 0	..	—
Ordinary sizes to 26 g.	32 0 0	..	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	30 0 0	..	—
„ „ 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 10 0	..	—
Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 8 ft. 20 g.	28 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	28 10 0	..	—
Ordinary sizes, 26 g.	29 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 15 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 0 0	..	—
Best Soft Steel Sheets, 26 g.	21 15 0	..	—
Cut Nails, 3 in. to 6 in.	18 10 0	..	19 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
Lead—Sheet, English, 4 lb. and up		38 0 0	..	—
Pipe in coils		38 10 0	..	—
Soil pipe		41 10 0	..	—
Compo pipe		41 10 0	..	—

Note—Country delivery 20s. per ton extra ; lots under 5 cwt. 1s. per cwt. extra.

Copper— Strong Sheet	per lb.	0 1 5	..	—
Thin „	„	0 1 6	..	—
Copper nails	„	0 1 5	..	—
Copper wire	„	0 1 5	..	—
Brass— Strong Sheet	„	0 1 3	..	—
Thin	„	0 1 4	..	—
Tin—English Ingots	„	0 1 10	..	—
Solder—Plumbers'	„	0 0 10	..	—
Tinmen's	„	0 1 0	..	—
Blowpipe	„	0 1 2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	„ fourths	7½d.
26 oz. thirds	7d.	Fluted Sheet, 15 oz.	5¾d.
„ fourths	6½d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
$\frac{3}{16}$ Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4½d.

OILS, &c.

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Raw Linseed Oil in pipes	per gallon	0 3 9
„ „ „ in barrels	„	0 3 10
„ „ „ in drums	„	0 4 1
Boiled „ „ in barrels	„	0 4 0
„ „ „ in drums	„	0 4 4
Turpentine in barrels	„	0 4 1
„ in drums	„	0 4 4
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		47 15 0
Red Lead, Dry	per ton	46 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
Genuine White Lead Paint— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	59 15 0

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Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
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Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

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Depot: Wainscot Sheds, Millwall, E. *T.N.: Avenue 667.*

A. OLBY & SON, LTD. (142,819), 167–169, Beckenham-road, Penge, Kent. Registered January 25. To carry on business of builders, merchants, wholesale and retail ironmongers, timber merchants, dealers in all builders' requisites, ironfounders, engineers, brass founders, mechanical, hydraulic and electrical engineers, painters, house and estate agents, etc. Nominal capital, £6,000 in 6,000 £1 shares.

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EKACERTIN, LTD. (142,785), 1, Austin Friars, E.C. Registered January 21. To acquire, take over, and construct machinery and plant or rights and licences in relation to machinery, plant, processes, and inventions, and carry on the business of general manufacturers and merchants, brokers, contractors, shippers, builders, etc. Nominal capital, £5,000 in 4,000 £1 Preference shares and 20,000 1s. Deferred shares.

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Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

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HOTEL À LA HAYE.

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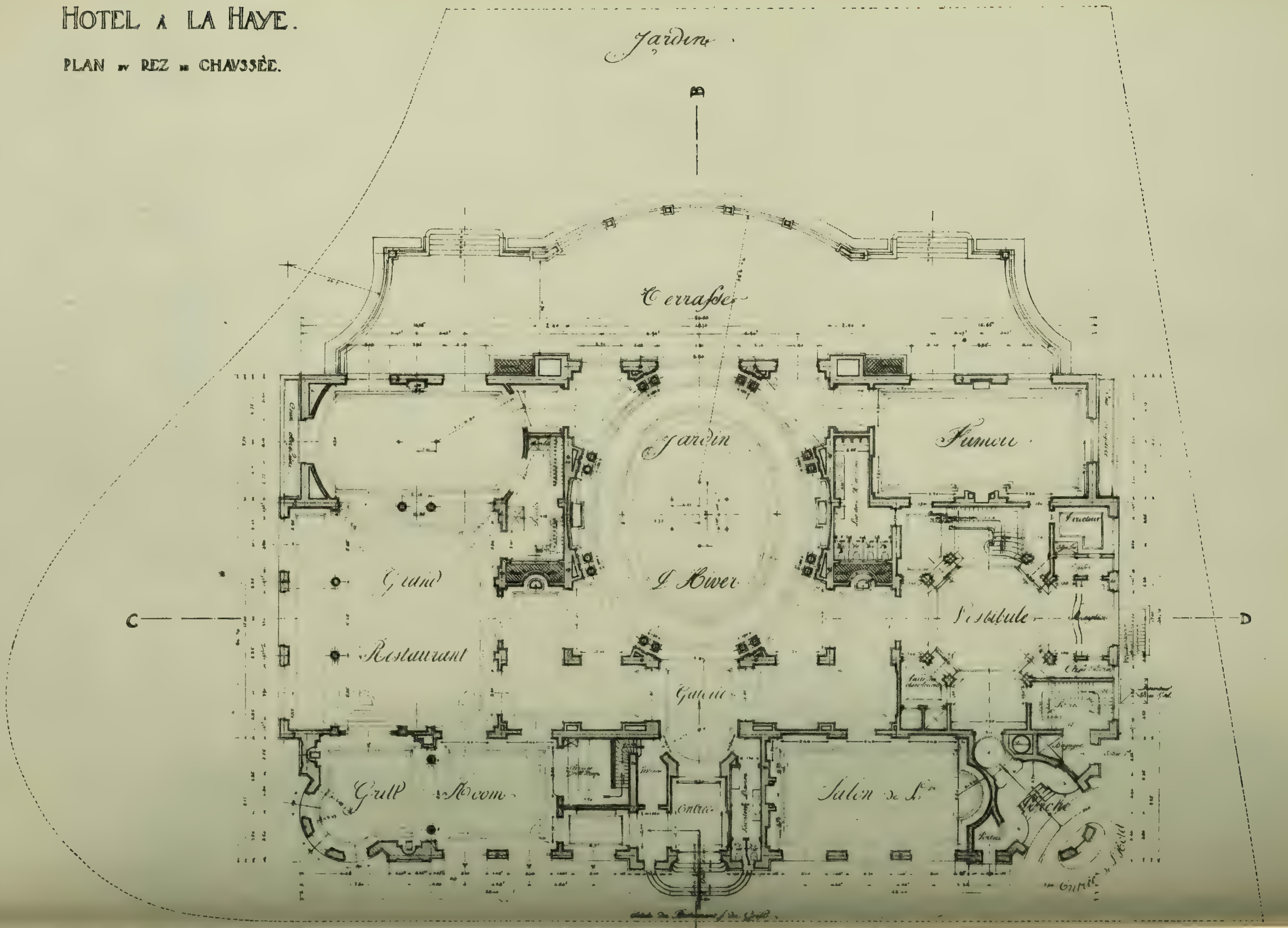

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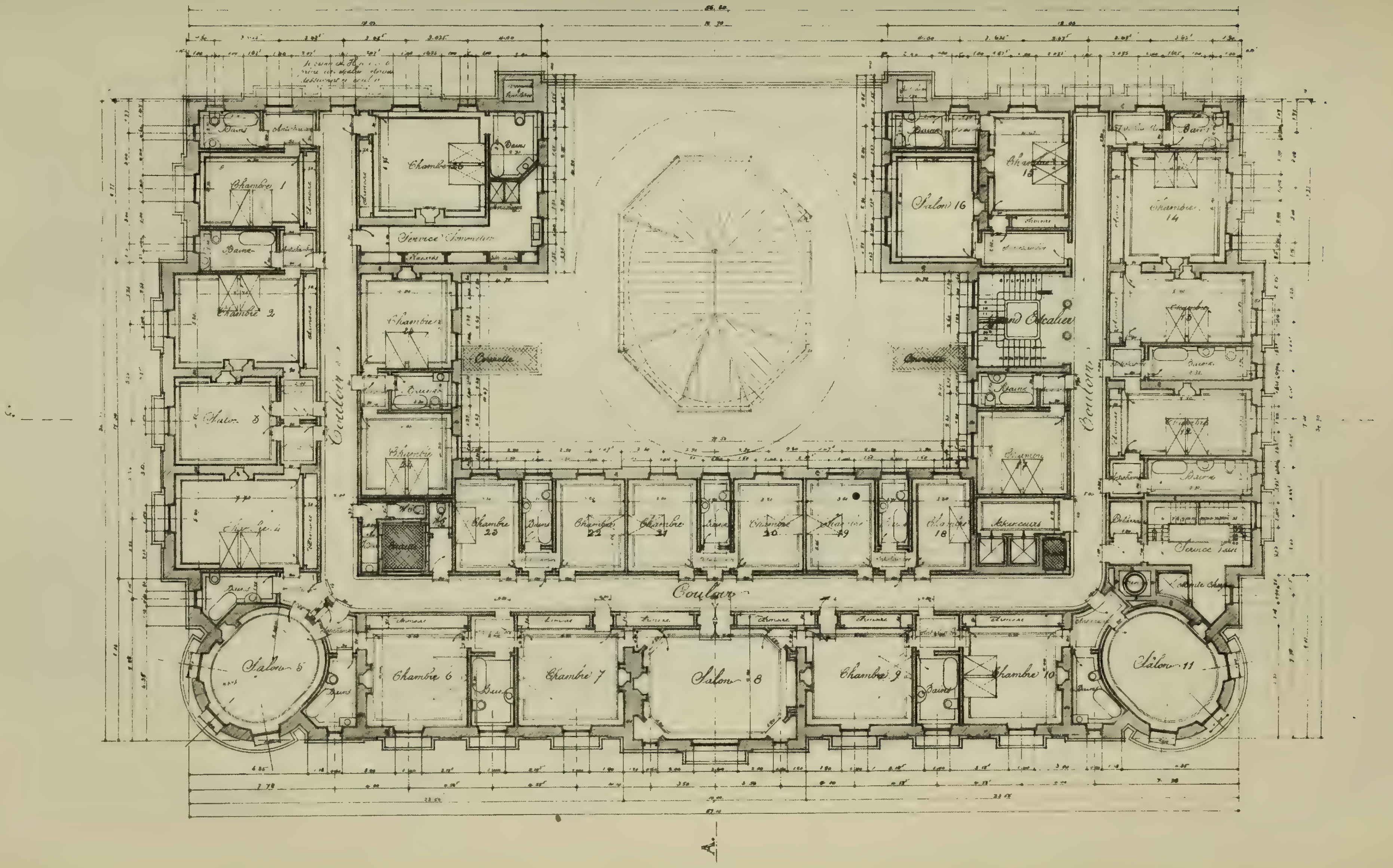
PLAN DES ETAGES.



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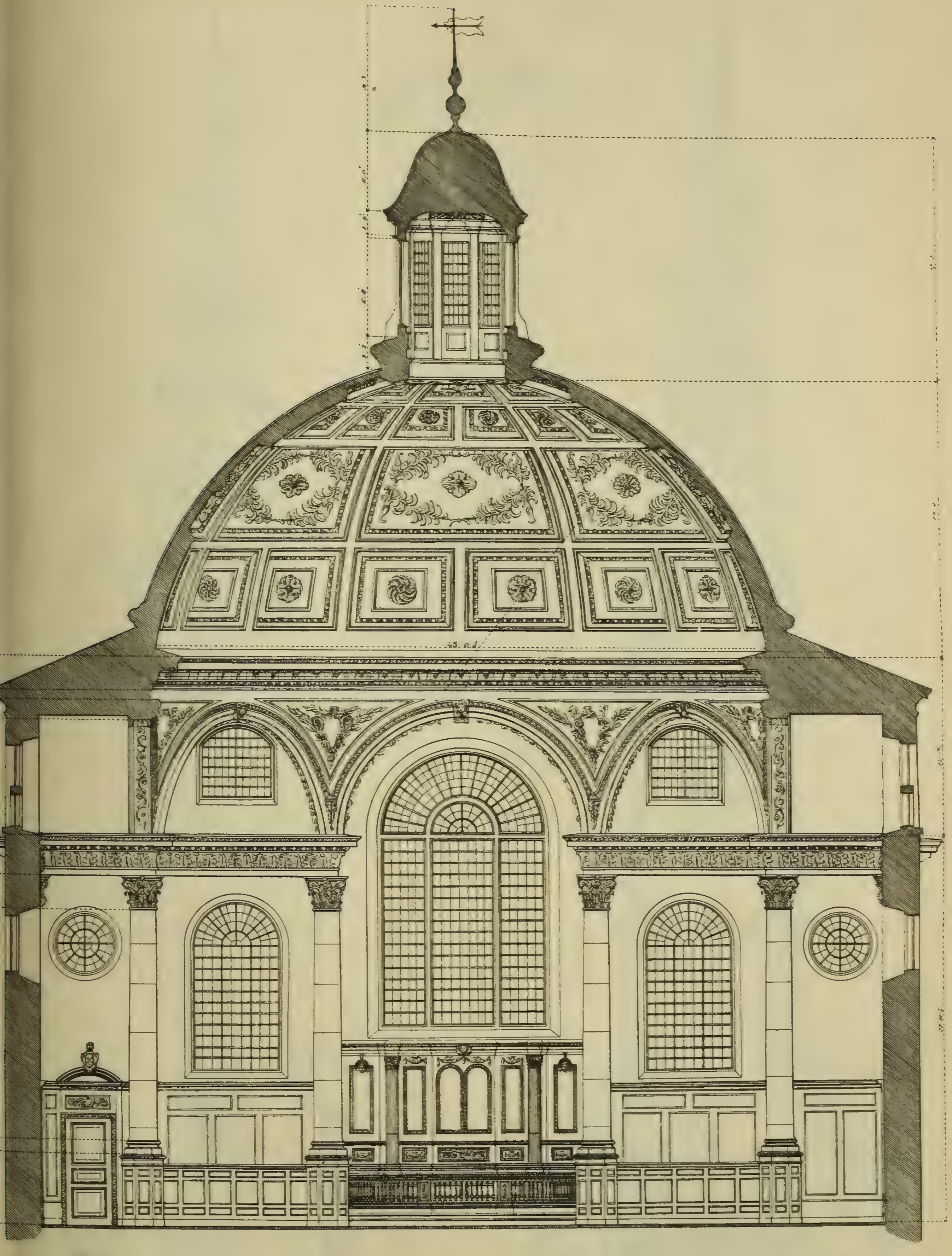

Transverse Section (¼ Inch scale)

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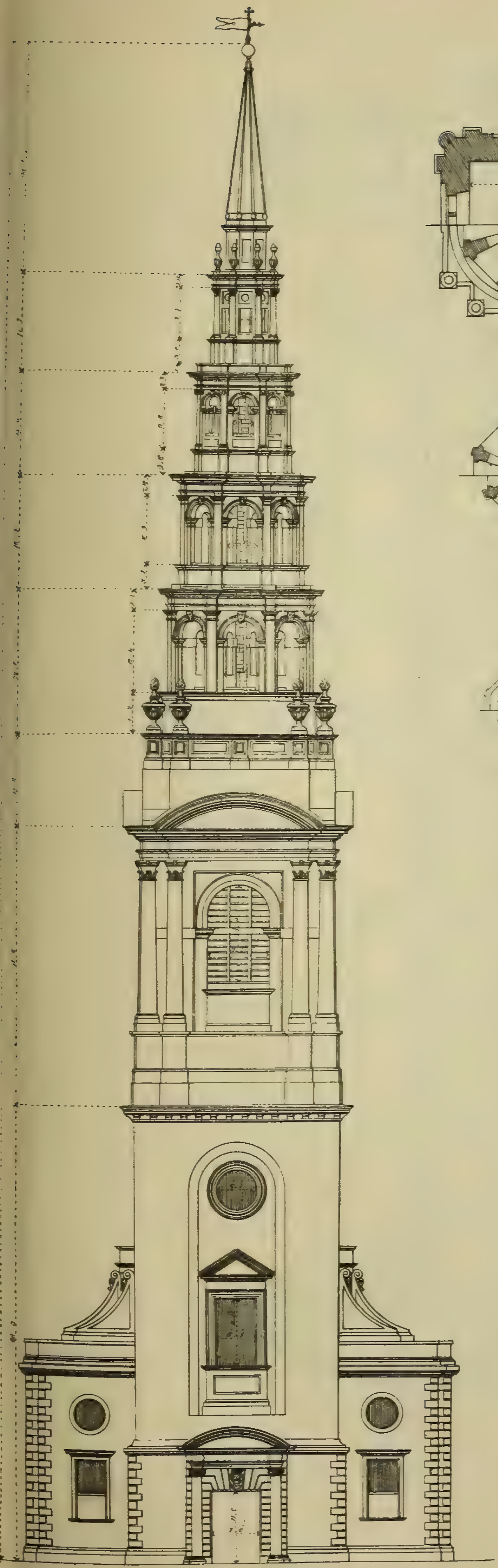
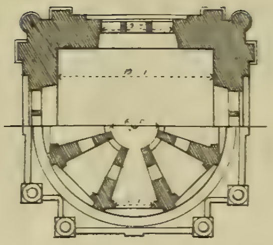


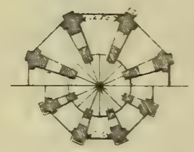
ELEVATION OF STEEPLE AND WEST END

PLAN AT A



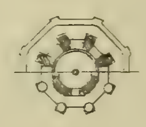
PLAN AT B

PLAN AT C



PLAN AT D

PLAN AT E



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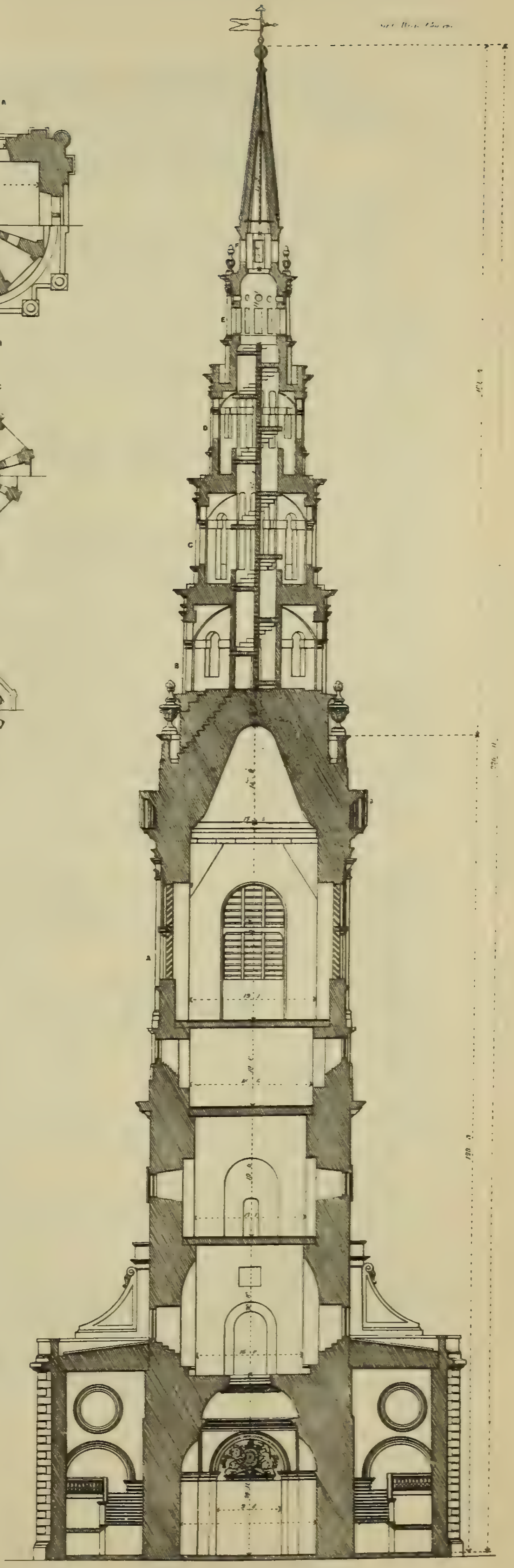

SECTION THRO' STEEPLE AND STAIRCASES.

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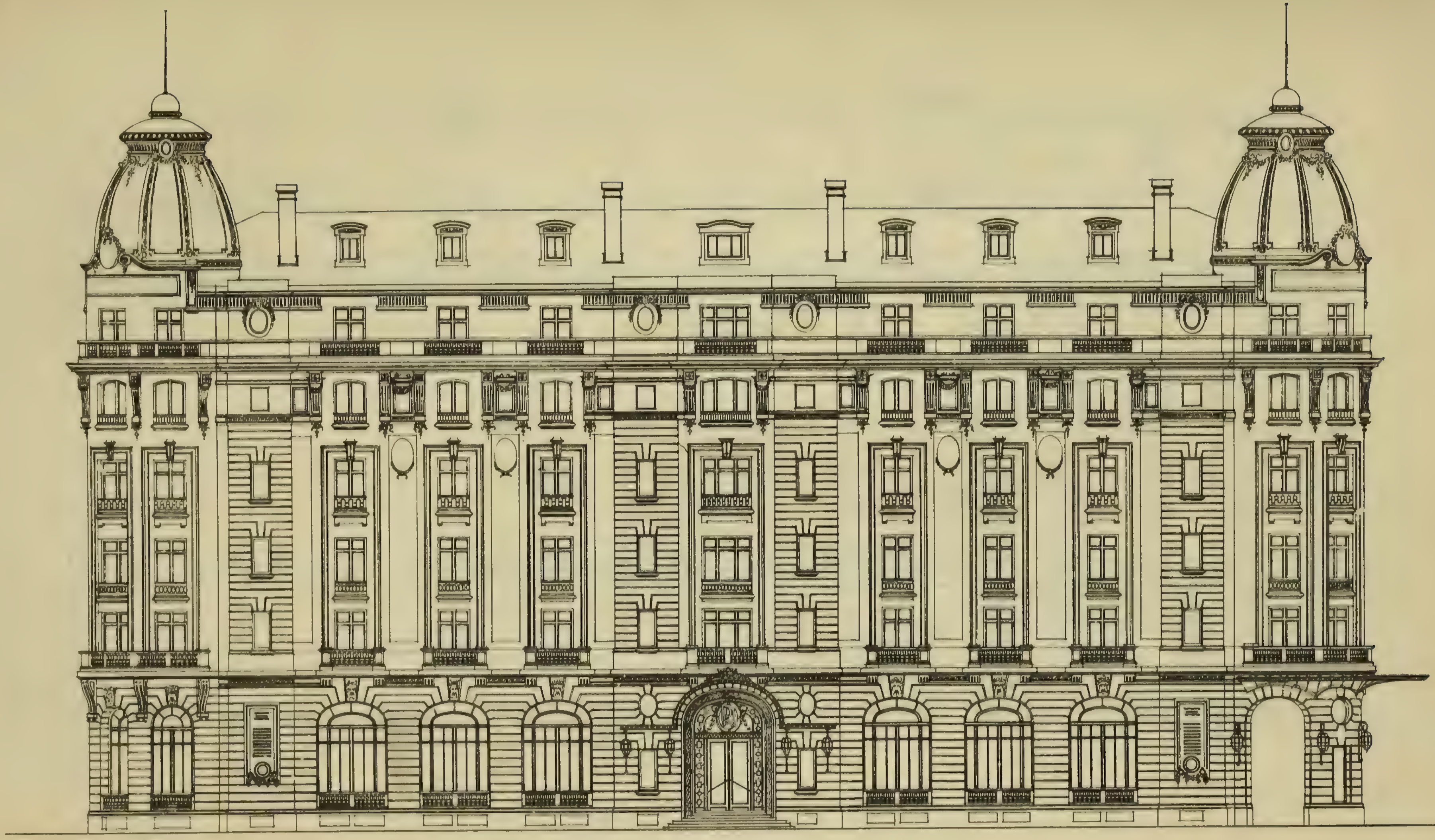
WREN'S CHURCHES: ST. BRIDE, FLEET STREET.

HOTEL Á LA HAYE



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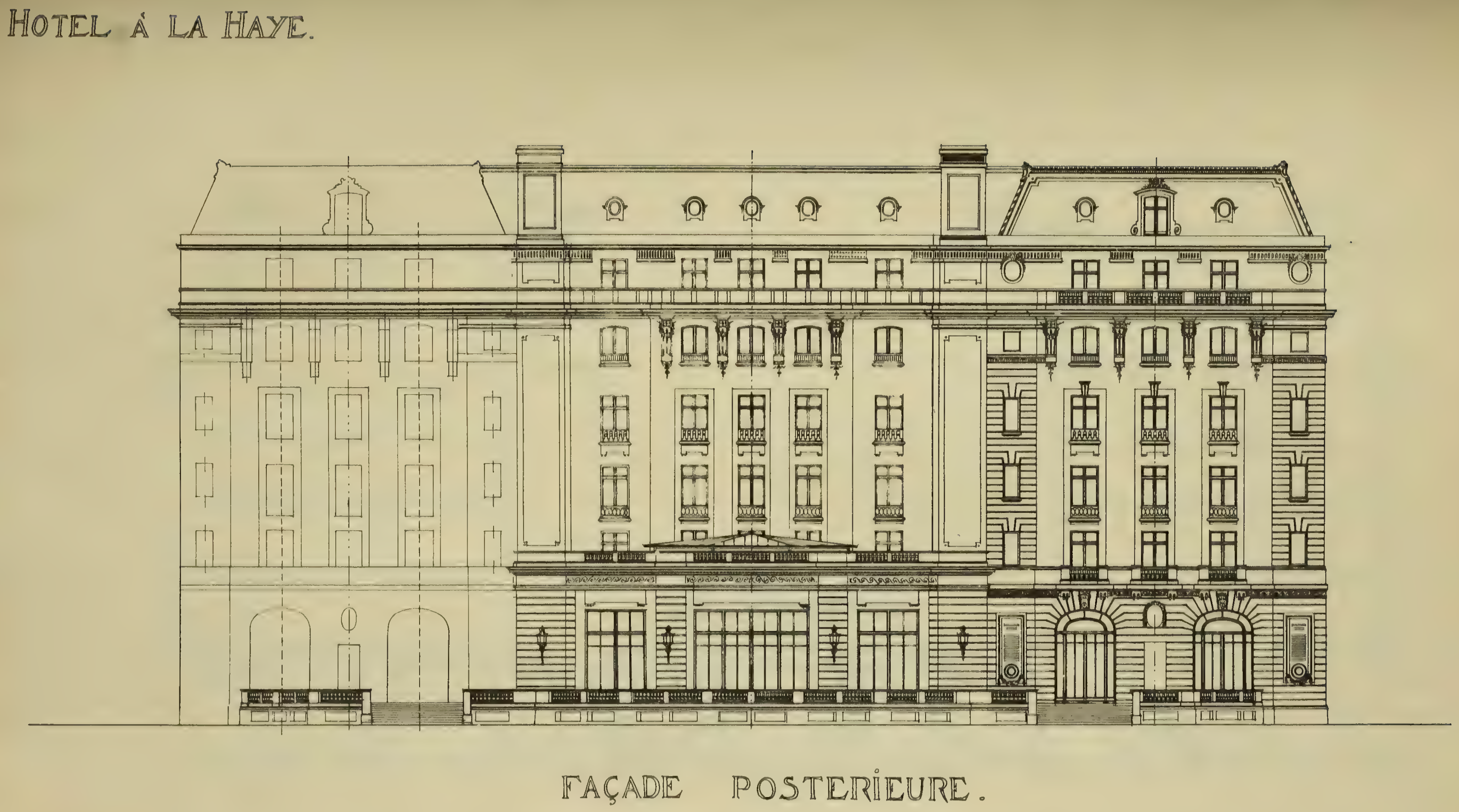

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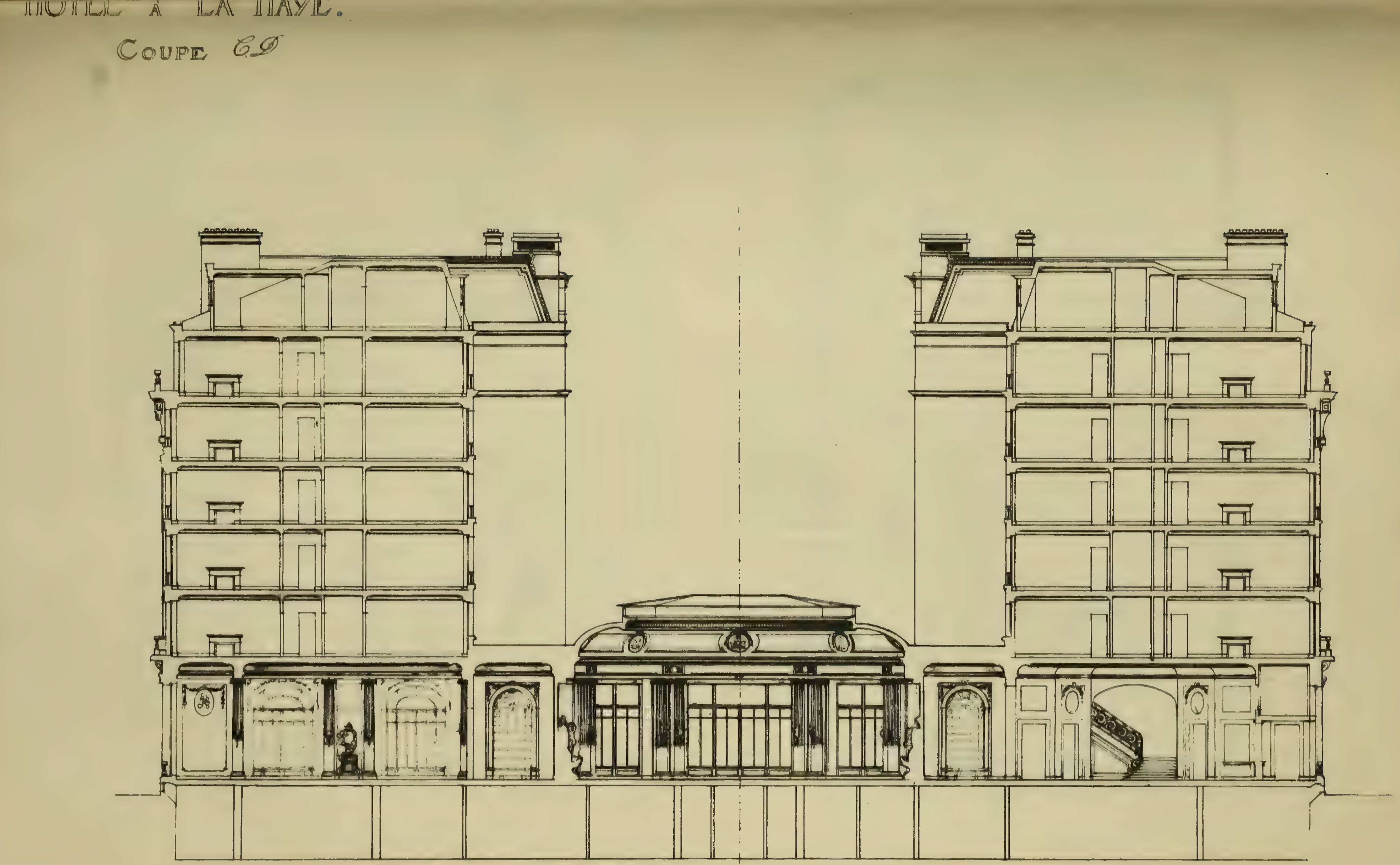

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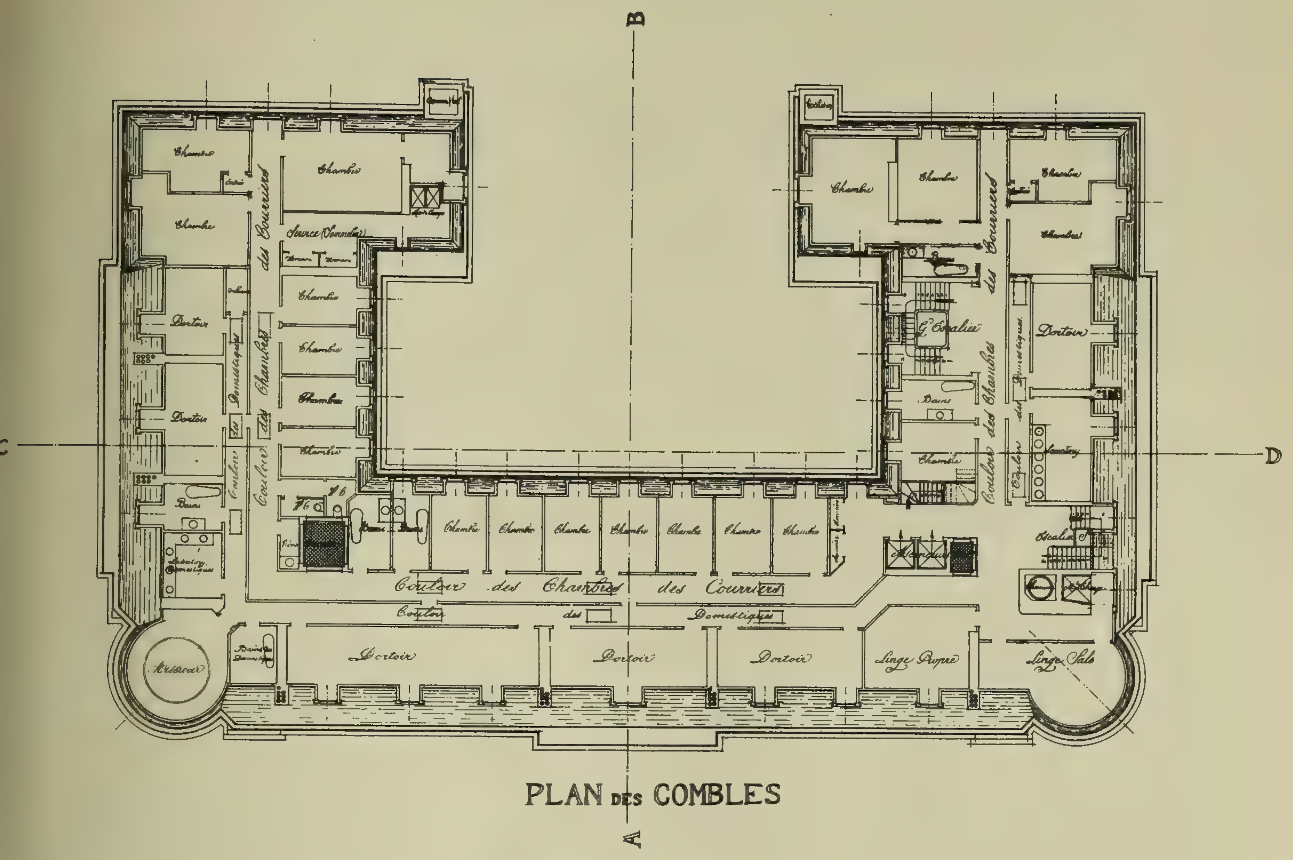
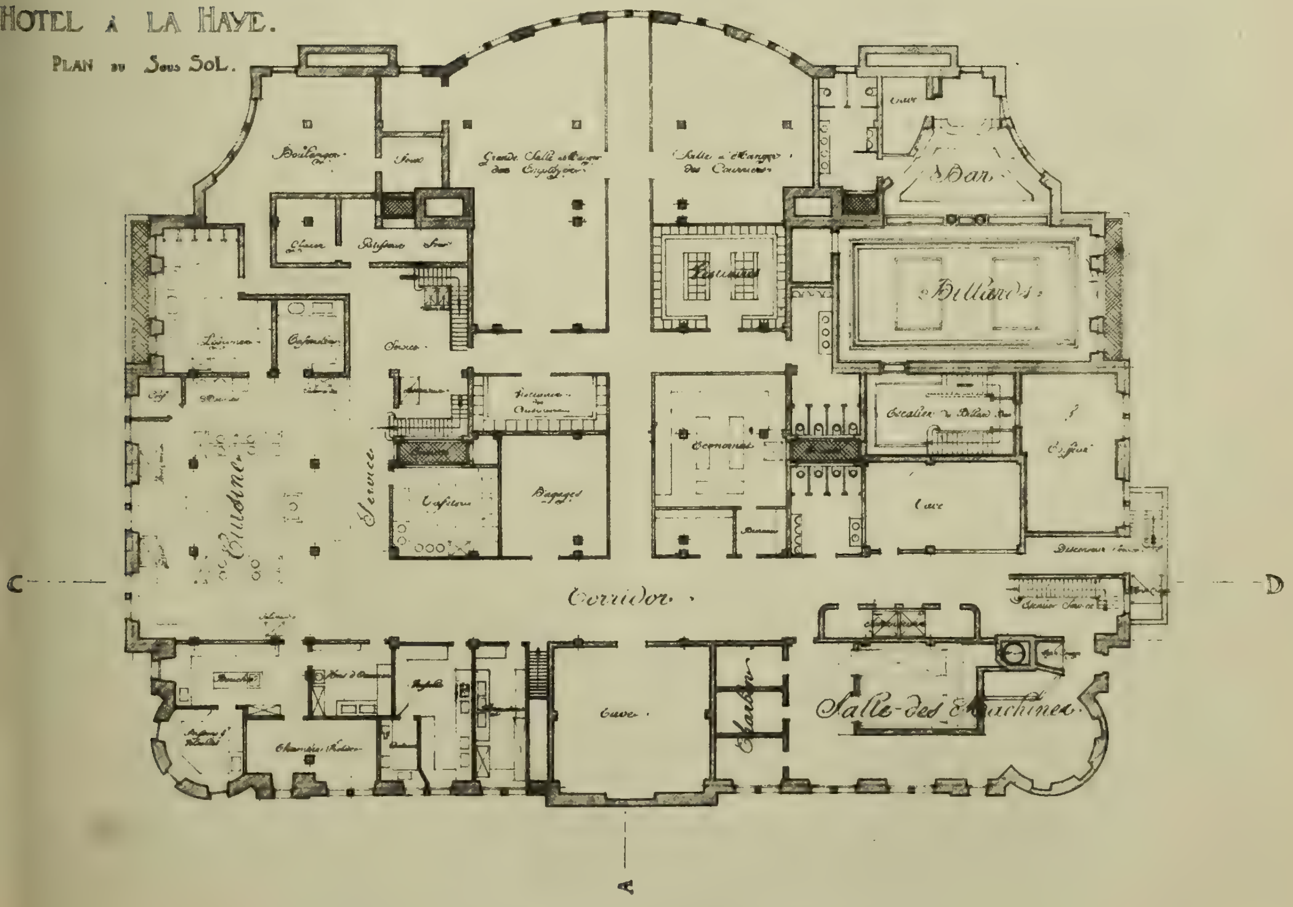


PLAN DES COMBLES

HOTEL À LA HAYE.

PLAN DU SOUS SOL.



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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

OL. CX.—No. 3812. FEBRUARY 25, 1916.

NORTH AND SOUTH.

IN his recent work on "Form and Colour" Mr. March Phillipps describes the main divisions into which architectural art falls as Eastern and Western, advancing arguments and giving illustrations to prove that the one is mainly and primarily concerned with form and other with colour. He seems to have overlooked the fact the geographic areas might with greater reason be described North and South, for what we describe as being Eastern ns are, without exception, characteristic of the South, while stern forms can be as truly defined as Northern. The one nition carries with it the recognition of the existence of ain fundamental differences of climate and therefore of ; the other is purely arbitrary. North and South also espond to certain date limits in the history of civilisation ch have less meaning as applied to East and West. The y civilisations arose in countries where the conditions of were easiest and the fertility of the soil offered fewest tacles to the accumulation of wealth. Such conditions were nd pre-eminently in the valleys of the Nile, the Tigris, and hrates, and perhaps in the alluvial plains watered by great slow-moving rivers of China, and it is therefore these regions that the first chapters in the history of lisation were written, thus affording proof of the all-ortant bearing of climate and physical conditions on the ory of architecture.

In the close jungle-covered countries of South-Eastern a, and in the corresponding wilds of Central America Yucatan, there are records of early civilisations; but, ure being more fierce and difficult to deal with, these rds have left fewer traces in past architecture. If we sue the parallel a little further we shall see that even in ope these apparent differences between the architecture of ious countries have been strongly influenced by climatic siderations produced by natural features, which often tly neutralise or vary the influences of geographical latitude. barrier of the Alps sharply separated Italy from the ns of Central Europe, no less than the long dominance of ne in Italy produced conditions which immediately began cause the differentiation of mediæval art in Italy from that he remainder of Europe; while in corresponding latitudes Spain no such marked differences exist, the greater part Spain consisting of high and arid tablelands, in which cold ters and other northern conditions exist, in spite of the ater altitude of the sun. And in mediæval Spain, most which was for long under the Government of an Eastern e, we find the counterpart of the Gothic of the North, h marked local characteristics, it is true, such as internal tresses and the introduction of the *cimborio*, but still Gothic, ch is utterly unlike the distinctive type of mediæval work duced in Italy. In Spain it is only when we are southward the central plateau that we find Northern influences gely obliterated in the fertile valleys stretching down to Mediterranean Sea. Nor can these differences be wholly ounted for by the longer period of Moorish rule in Southern in, for clearly in a large measure they are the result of the erent influences of Northern and Southern conditions on habits and wants of mankind.

Just as Italy has been isolated from the North by a barrier mountains which abruptly mark the transition from North South, a change expressed in the different architectural racter of its buildings, so to an even greater extent has lia been cut off from Central Asia by the most stupendous in of mountains in the world, on one side of which is the at plateau of Tibet and Turkestan, on the other the water-d of the Ganges and the Indus, which flow through heated plains to reach the tropic seas. North of the Himalayas the architectural type is Tartar-Byzantine or Russian and Chinese; while to the South we have the various developments of Hindu architecture, all distinct variants of a Southern theme. Even the Muhammedan conquerors of India, whose invading troops poured through the passes from the north-west and whose Dynasty ruled in Delhi, quickly absorbed what was Southern and most indigenous to the Indian peninsula, and Moghul art became more Indian in character than Saracenic.

We do not assume that the expression "North and South" explains and accounts for different forms of art, as we are led by Mr. March Phillipps to think that "East" and "West" define them. There is the influence of race, and we should expect a different development among the intellectually inquisitive Greek and the contemplative Hindu, or the masterful Roman, determined to reduce the mundane matters of life to system and order.

But we do assert that throughout the South, whether in East or West, certain broad characteristics obtain—characteristics which are determined by latitude rather than longitude. In the South we have the love for external display, the prevalence of the horizontal line, a sense of amplitude of space; and in the North the striving for security and protection, the cultivation of architecture as a means of the production of interior spaces, the steep roof and more broken outlines due to the effect of climate.

Across the thread of æsthetic tradition moves the shuttle of great world developments, like that of Christianity, which entailed a common ritual and a form of building suited to that ritual and to its traditions on North and South alike, and the great movement of the Renaissance which, spreading from its birthplace in Italy, set up a common standard of form for the civilisation of the day; and, lastly, modern science annihilating the effects of distance and using wealth and the resources of science without regard for the dividing lines of nationality and race. Yet we know beneath the cosmopolitan influence of these unifying tendencies natural architecture can only rise to its greatest pitch of excellence when we can say of it that it indicates a just sense of its position as regards North and South. Palladio's Basilica at Vicenza would be an anachronism in an English town, nor would the Banqueting Hall in Whitehall please us in Italian surroundings; while St. George's Hall at Liverpool is a magnificently audacious but unsuccessful effort to ignore conditions of time and place.

And the British Museum marks a further incursion into the domains of unfeeling pedantry in art. The difficulty which faces the designer is that to do good work he must obtain knowledge, but that in obtaining what he needs he may wander enchanted with the treasures of the past, missing the eternal truth that all he can learn must be used with reservations, and that the most important of the limitations set is the eternal barrier of latitude.

To produce the best work it is necessary to be guided by the results of the workers in the days of tradition, which implied the gradual adoption of what was suitable and consistent in each locality; so if we are able, out of the funds of a greater knowledge of the past, to do this intellectually rather than mechanically, the store-house of knowledge opened up to us will be an aid and not a deterrent to the production of suitable design. But if we ransack its treasures greedily and without judgment we shall be pitiful mummers dressed in the garments of past ages—what we produce will be a travesty of the past unsuitable to clothe the present, and we shall probably find we have overlooked the eternal distinctions conveyed by the terms North and South.

NOTES.

Liverpool Cathedral.

Liverpool Cathedral is naturally being proceeded with more slowly than in normal times, Dr. Chavasse having stated the three possible courses which might be adopted, as follows:—First, to raise the sum of £40,000 to complete the choir and central space by midsummer of next year; secondly, to stop building altogether; and, thirdly, to invite generous churchmen to subscribe the sum of £13,000 to complete and safeguard the shell of the building; and the Bishop thinks the third the only wise and practicable policy, in which we consider he is justified. We are glad to hear that the response to his appeal has been so generous that in a few weeks £8,000 has been subscribed, so that £5,000 alone remains to be found. We trust it will not be very many months before Dr. Chavasse is able to appeal for funds to complete the building which has appealed so successfully to the imagination of the inhabitants of Liverpool, for the completion of the greatest English cathedral of modern times would form a fitting memorial to the historic events of the present war, to which Liverpool and Lancashire have contributed so large a quota of men in the fighting line, and men and women workers for the large army of munition workers on whose efforts the outcome of the war so largely depends. The response of the great industrial centres to the call of patriotism has been one of the finest incidents in the present colossal struggle.

A Hindu University.

One of the last of Lord Hardinge's acts as Viceroy has been the laying of the foundation-stone of a new University at Benares which is to cost the equivalent of £2,000,000, of which about a third has been already subscribed. It is the first Indian University promoted and founded by non-official agencies, and will be the first to impart religious instruction. The site is the gift of the Maharajah of Benares, and, with the exception of Mrs. Annie Besant, Indian effort alone is responsible for the foundation of the University, the internal management of which will be left in native hands, while the Government only retains some powers to prevent mishaps. We are glad to record the new departure which indicates the wish of those in authority to encourage the development of Hinduism along its natural lines, trusting to higher education to bring community of aims between European and Hindu, each arriving at the same end by different means suitable to their respective races; for, though fusion between East and West is impossible, parallel development along different lines will bring greater mutual understanding in its train. We shall be interested to learn in what manner this, the first great Hindu educational building of modern times, will be expressed, and whether we shall see a version of the vernacular or a species of new development like that instituted at the new Delhi.

An Objectionable Advertisement.

Our attention has been called to what may be described as a very objectionable form of advertisement which has appeared in the daily Press:—"Ladies and gentlemen of good social position who have personal influence with architects and surveyors who are about to erect new buildings can add substantially to their income. Apply by letter to ———" In the reply sent to an inquirer the firm in question, who are constructional engineers, state that they will be glad to pay 5 per cent. on the value of any work introduced, but are not keen to enter into competition with other firms for this class of work, because, "as we make a very special feature of promptness of delivery and completion, we are not the cheapest firm in the market." We think the advertisement appeals to an objectionable element, as the "ladies and gentlemen of good social position" are presumably without the special knowledge which would enable them to recommend the firm's work on its merits, and the presumption is that "social influence" is to be employed in a manner which, if commonly practised, would lead to the wholesale degradation of society.

Quantities in America.

We have before us an American circular entitled "A Word to the Advocates of the Quantity System," to which is pinned a copy of a circular addressed to the Fellows and Members of the American Institute of Architects by Mr. G. Alexander Wright, of San Francisco. The two documents read somewhat quaintly, and from them we gather that the recent attempt to introduce the quantity surveyor to the Western world is somewhat hampered by ignorance of the nature of his task, otherwise such clauses as the following would hardly be required:—

> These quantities, and improperly so, force the bidder to refer back to the drawings and specifications before he can determine his itemised cost values. All information necessary to determine items of cost and quantity should appear in the quantities. To give this is clearly duty of the quantity surveyor. His fee covers this service.
>
> The suggested protection against incorrect quantities by a su company bond becomes a doubtful issue if the quantities contain cove clauses capable of being so construed in a court of law as to pro the parties who prepared the quantities, and necessarily their bid company also. Architects who have had experience following a with the attorneys for a bondsman, will realise what they might exp when the language of the quantities makes it obligatory upon a bid before bidding, to examine all the drawings and specifications (wit view, of course, to his including every cost in his bid). There is a condit a loophole, here which should not be.

Although it is difficult to imagine what architects here would without quantities, it seems certain that, if American archit require the information which Mr. Wright gives, they can have li idea of the real object of the use of quantities and of their nat It seems an anomaly that in America, where the processes of are "speeded up," the builder should have time to take out own quantities from architects' drawings as was the case here ye ago, when pupils and assistants laboured over the production numberless tracings to enable competing builders to take out t quantities from. We should like to know whether the Ameri contractor has special methods of estimating.

Greek Art.

Professor Harrower recently delivered a lect on the "Unity of Greek Art" at the Aberd Architectural Association, in the course of which stated that anyone desirous of illustrating all the unifying influer of the art of the Greeks would naturally choose sculpture, but s characteristics were presented even more clearly in their architect such as clarity, lucidity, balance, simplicity, harmony and proporti as well as strong conservatism, organic growth, and the discoura ment of chaotic individualism, and, above all, the appeal to se and intellect rather than to emotion. All these qualities were to found in Greek literature, and it was not too much to say that fundamental principles of Sophoclean tragedy took concrete form the Parthenon. Greek theorists did not regard architecture as of the fine arts, for it was not mimetic and did not represent a thing, least of all that which the Greeks considered as the pro object of artistic representation, the human form and the hun spirit. Plato united architecture with music as possessing an ethi value and influence. It was a common Greek belief that a m could ruin himself body and soul by bad music as surely as drunkenness or any other vice. Professor Harrower went on to that he himself was insensitive to architecture, and if any archit chose to put two hopelessly degraded copies of the Choragic monum of Lysicrates one above the other to form a tower, he did not gn his teeth, but supposed it was Classic and right! Not the le entertaining suggestion of a clever paper was the reference to Andrew Carnegie, who said they would not find one ennobling thou in Homer's barbarisms. "This criticism," the Professor sa "should be listened to with the respect due to Mr. Carnegie's w known critical eminence and fine literary taste." Such address though they convey little fact, are useful and illuminating to architectural student, showing as they do the range of mental ima which is only possessed by those whose education is not bound by the limits of their calling.

The British Industries Fair.

The British Industries Fair is being held at Victoria and Albert Museum from February 21 March 3, and in order to avoid interference with production of munitions of war the exhibits t year are limited to printing and stationery, earth ware and glass, fancy goods and toys. About 100,000 invitati have been issued by the Board of Trade to wholesale buyers h and abroad. The greater part of the ground floor of the Muse has been cleared of its permanent collections to make room for Fair. It is believed that one of the most interesting and use features of this year's Fair is the inclusion of exhibits of spe mens of articles which the Germans have hitherto supplied in la quantities for this country and for oversea markets. The Board Trade express themselves as being pleased to see that manufactur as a whole are keenly alive to the new opportunities open to th and mean to make use of them. We, too, are glad that this shou be so, and hope that those in authority will assist as they can efforts of private firms to increase national trade. British tra has been created by private enterprise, and has had to fight its w in the teeth of foreign State-aided competition, scientifically organis and helped. Our consuls—supposed to look after British interests are largely foreigners; our Government, giving every rival free acc to our markets, has been denied favourable terms in those of rivals, and the British merchant alone has had no organised help rely on in his difficulties. We should much like to know that all t will be changed when peace comes, and that the interests of o own people will not be sacrificed because of the altruism or indifferen of our Government.

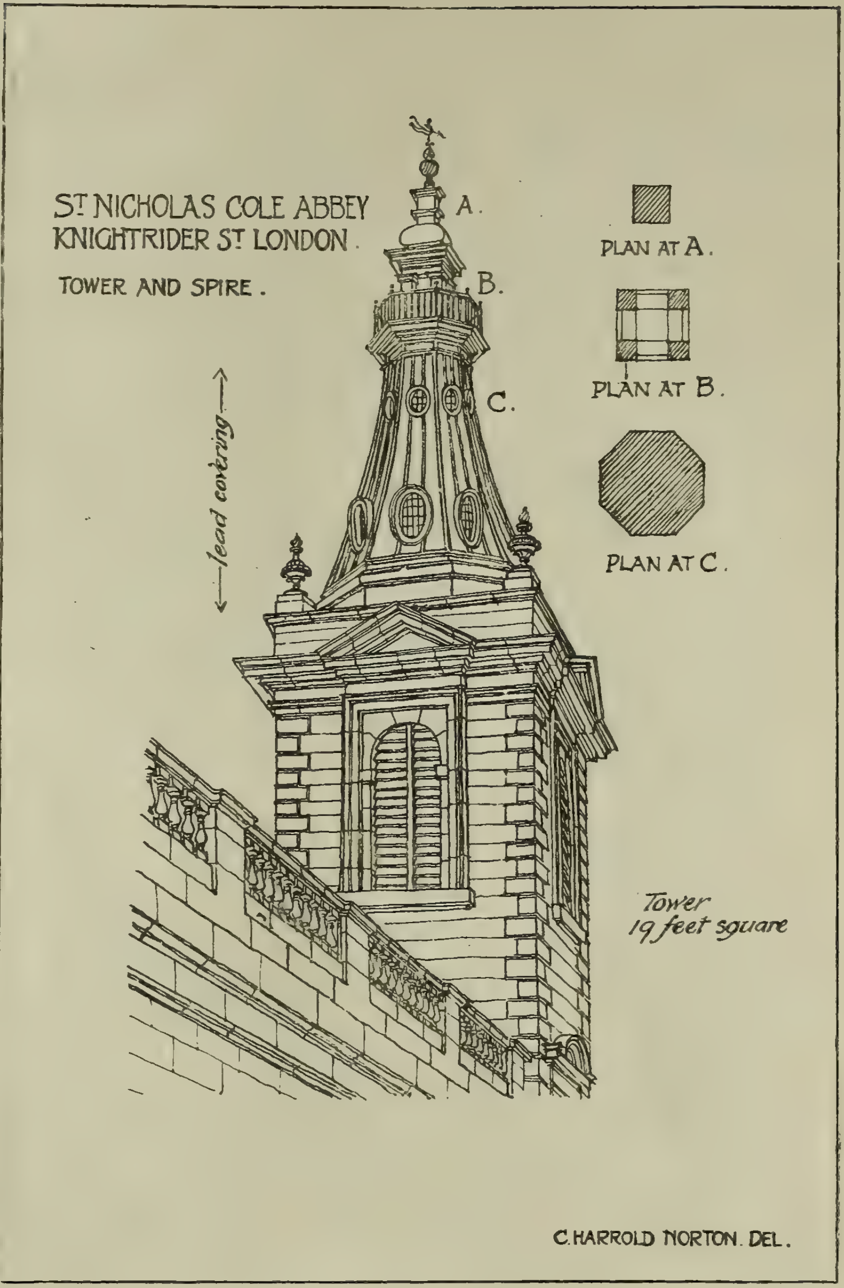
: LONDON CHURCHES F WREN AND LATER RCHITECTS OF THE ENAISSANCE.

o. XV.—St. Nicholas Cole Abbey.

Church of St. Nicholas Cole Abbey
on a site between Knightrider-street
ueen Victoria-street, its chief approach
from the last-named street up a flight
ps, but the principal elevation is to
rider-street, on which the tower fronts.
resent church serves the parishes of
cholas Olave, St. Mary Mounthaw, and
ter's, Paul's Wharf, which were not
after the Fire; St. Mary Somerset,
was pulled down in 1871, with the
on of the tower; and St. Benet, Paul's
now used for extra-parochial purposes
Welsh church. The advowson of the
benefices is now in the hands of the
nd Chapter of St. Paul's.

present church was completed in 1677
st of £5,500, and replaces an older church
ed in the Fire. The designation "Cole
" is probably a corruption of St.
s Colby, and refers to a founder or
.

church shows less trace of classical
ce than most of Wren's designs, and is
by great simplicity and freedom of
g. The steeple is particularly pleasing,
ce that of St. Edward King and Martyr
nbard-street, rather suggests Flemish
ce in its bold and picturesque outlines
tails. The proportions of the north
with its simple range of windows,
ade, and cornice, are very pleasing.



The church contains a fine screen across the west end, with good door-cases, and a modern organ over, a fine pulpit, and an interesting altar-piece. Gold has been used internally in a very happy manner, and the church, though unusually secular in appearance even for a building of the epoch, is both rich and pleasing in effect. The north wall is broken by a range of windows affording ample light; the corresponding blank wall on the southern side is covered with ornaments and memorials of considerable interest. The ceiling is flat and formed of beams with pendants at their intersection. The interior shows to full advantage, as it is in a good state of preservation and carefully decorated.

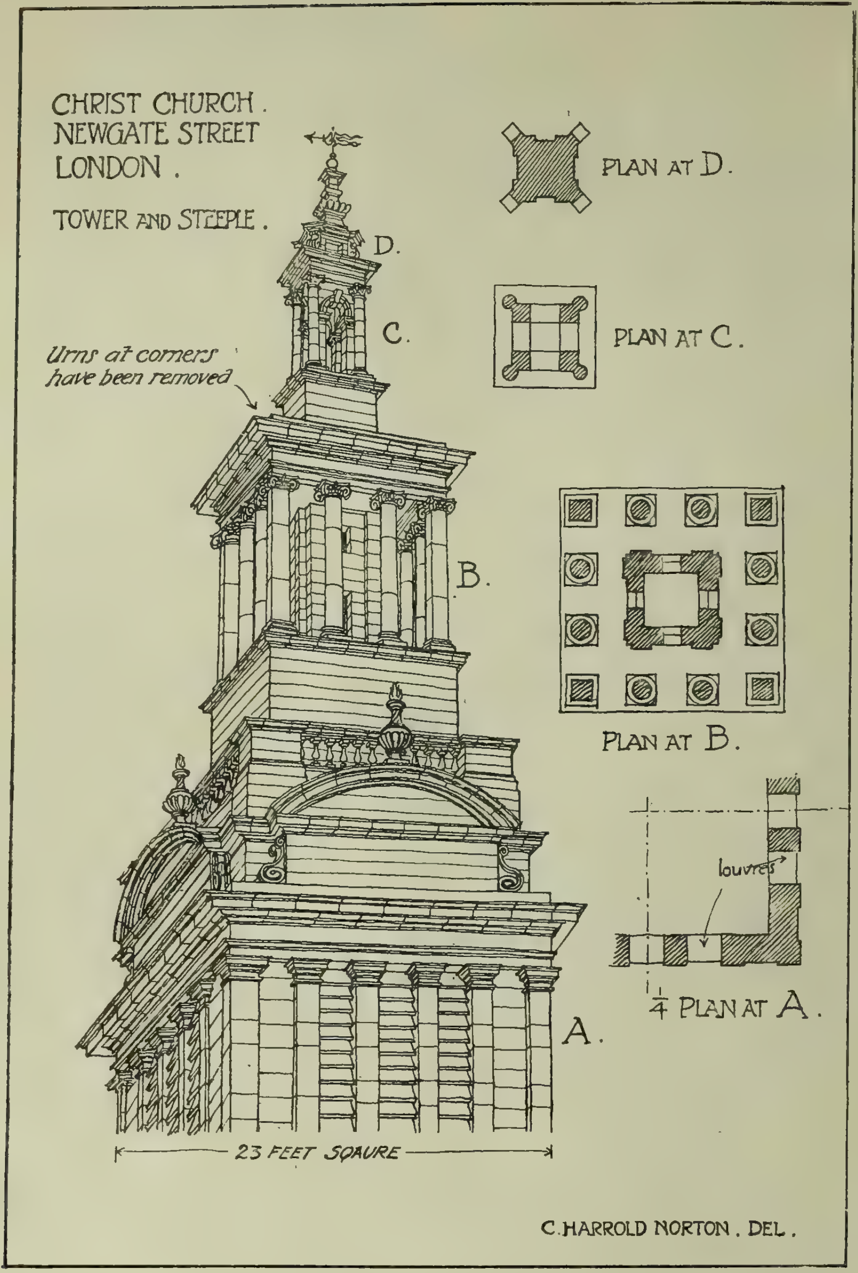
No. XVI.—Christ Church, Newgate.

Christ Church, Newgate, stands to the north of Newgate-street, and occupies about half of the area of an ancient Franciscan church. A church and monastic buildings were erected on the site, which were replaced by a greater building, the choir of which was commenced by Queen Margaret, the second wife of Edward I. This church of Gray Friars was consecrated in 1325, and measured 300 ft. in length by 89 ft. in breadth.

Stow states that the parishes of St. Nicholas and St. Ewin and so much of St. Sepulchre's parish as is within Newgate were made one parish church in the Gray Friars' Church and called Christ Church, founded by Henry VIII. The conventual buildings were adapted to charitable purposes. The old church perished in the Fire, the present church being built in 1687 and the steeple added in 1704. The chief interest of the church, the largest of all Wren's London churches, is the treatment of the wide west front and steeple, the successive stages of which are all square and unusually abruptly diminished in size. The projection of the tower, which is entirely outside the body of the church, cuts the west front into three defined sections. Though the detail is less refined and careful than that of many contemporary works, the whole effect is full of character and interest. The interior, on the other hand, though striking from its dimensions, is commonplace in design and detail, and much spoiled by the steep rake of the side galleries, which were reserved for the use of the boys of the Blue Coat School. The east end contains the group of windows which compare so unfavourably with the large traceried window of a mediæval church, and which are usually better omitted where exigencies of light do not necessitate their introduction. In the church "the Spital Sermon" is preached annually on Easter Tuesday, and attended in state by the Lord Mayor, sheriffs, and aldermen. This sermon was formerly preached at the cross in the Spital (Spitalfields), and afterwards at St.

[Photo.: Geo. Trotman.

St. Mary Somerset.



Bride's until 1797, after which date it was preached at Christ Church.

With Christ Church is united the parish of St. Leonard, Foster-lane, which was not rebuilt after the Fire, and the presentation is made alternately by the governors of St. Bartholomew's Hospital for Christ Church and the Dean and Chapter of Westminster for St. Leonard's.

There are a number of monuments of interest in the church, the most interesting artistically being two in the entrance vestibule, while under the tower are several tablets removed from Christ's Hospital.

Christ Church is not among Wren's most successful efforts, and bears too great a resemblance in design to some of the larger churches of later and less interesting epochs of the Renaissance, but it stands on a site which recalls many historic memories and traditions.

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MUNICIPAL OFFICES, SPENNYMOOR.

The new municipal building of the Spennymoor Urban Council was opened recently. The building comprises a Town Hall and Market Hall adjoining. The Market Hall is 141 ft. long, 39 ft. wide, and 16 ft. high, whilst the Town Hall is 84 ft. long and 40 ft. wide, with seating accommodation for 850 persons. There are also the council chamber and offices. The contractor was Mr. J. Miller, of South Shields, and Mr. Wellburn was the architect.

ARCHITECTURAL SOCIETIES.

Birmingham Architectural Association : Flemish Art of the Middle Ages.

Before the members of the Birmingham Architectural Association, on the 18th inst., Mr. J. A. Swan, F.R.I.B.A., lectured on Flemish Art of the Middle Ages as reflected in the incomparable public buildings which the Germans during the past eighteen months have laid in ruins. Flemish art, it was said, borrowed much from the German and French, but he held it undoubtedly indigenous. For its true character they must search the record of the great towns. In spite of the strong German and French influence there was a great unity of expression, whether in architecture, painting, sculpture, or the allied arts, Gothic or Renaissance. They were much imbued with the spirit of romanticism. It would not be too much to say that the countries closest in contact with the Netherlands were infected with this exuberant vitality. They took it to themselves, and our own country owed an immense debt to Flemish art in the Elizabethan and Jacobean periods. In architecture the best of the Flemish work was built for secular rather than ecclesiastical use. Bruges, Ghent, Antwerp, Malines, Brussels, Louvain, and Ypres provided a magnificent series of town halls, cloth halls, belfries, and guild houses. Ypres, which held much beautiful Flemish work, was now a tragedy in stone. But
magnificent work there had been there!
familiar Cloth Hall and Hôtel de Ville
much to the splendid square of 1,000 ft
350 ft. in which they were set, an examp
civic planning worthy of emulation. It
an impressiveness and grandeur to the buil
Mr. Swan compared it to Victoria-square, w
forms the setting for our civic buildings
hundred years ago Ypres might have
emulated in Birmingham by acquiring
whole of Christ Church, Colmore-row,
Waterloo-street up to St. Philip's Church.

Glasgow Institute of Architects.

A quarterly general meeting of the Gla
Institute of Architects was held on the
inst. at the rooms, 39, Elmbank-cres
Glasgow, Mr. John Watson, F.R.I.
President, in the chair. It was reported
the President had been appointed as ass
from the Institute on the examining ju
the Glasgow School of Architecture in roo
Colonel J. B. Wilson, whose term of
had expired. The meeting took into
sideration the regulations for contracts
building works in Scotland which were i
recently by Sir G. R. Askwith, and
were fully discussed, and explanations
given regarding certain of the articles.
proposals of the Library and Educ
Committee with regard to student men
of the Institute were brought before
meeting and approved of.

The Architectural Association of Irelan "Round About the Adriatic."

Mr. Harold G. Leask, President, occupie
chair at a meeting of the Architectural As
tion of Ireland, Dublin, on the 10th inst.,
Mr. J. White delivered a lecture en
"Round About the Adriatic." In the c
of his lecture, which was illustrated by la
slides, Mr. White described Corfu and the fa
forts of the Adriatic coast. He convey
audience to Trieste, and showed views o
great caves of Adelsburg, extending for
beneath the mountains. Crossing to Ver
number of picturesque views were sh
including St. Mark's. The lecturer gave d
of Venetian work in various towns. In
he said, were to be found the finest exa
as there they appeared not to have cr
works for time, but for eternity. Foll
the Dalmatian coastline, Spalato he referr
as associated with the Emperor Diocl
whose palace formed the nucleus of the p
city, which has a population of over
Mr. White gave an interesting accou
Ragusa, one of the great harbours of
Adriatic, and Cattaro. In conclusion, h
scribed that great triumph in engineerin
zigzag mountain road from Cattar
Montenegro.

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CORRESPONDENCE.

Architects and Public Services.

SIR,—Your published list of authenti
cases of waste and mismanagement in all
of building work connected with the
presents one aspect only of a state of
the serious nature of which does not
even yet to be quite realised by those
position to remedy it.

From your columns we learn of was
money, materials, and labour—with conse
loss of national efficiency—caused to a
large extent by the lack of competent org
tion and supervision of building operatio

From another point of view we see the
majority of the members of a prof
specially trained for this very work sta
idle because their usual work has been st
by the Government, whereby the countr
been deprived of their expert services
matter having a direct bearing on the succ
prosecution of the war.

Taken singly, either of these aspects
possibly be looked upon as an unavoi
misfortune; taken together, they constit
scandal which can and should be avoided.

In spite of repeated representations
by those entitled to speak on behalf o

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* See our last issue, page 147, North-W
Federation Report.—ED.

sion, the Government appears to have no official and systematic attempt to y architects in their war buildings, not those architects whose work has been d by direct Government action.

at has been the Government attitude ds those who might be said to have a l claim on the country?

you are aware, the Architects' War ittee has collected funds to provide yment for those badly hit by the war, the Government Committee for the ntion and Relief of Distress, by means National Relief Fund, repay from time e about one-half of the amount spent in by the Architects' War Committee. overnment Committee is also paying the nely small salaries of a number of ects who are engaged on civic survey es in approved areas. This action has ubt been of considerable assistance to rofession, but it is to be noted that the used in this way are not Government but moneys definitely subscribed for ses of relief.

en, however, the need arises for more for the munition factories and other war what happens?

at I suppose might be described as semi-l hints or suggestions are conveyed to Architects' War Committee that relief d not be granted to applicants who r eligible for work in munition factories. eems to have occurred to the Government he Government Committee that there is nse in providing useless work for those f employment when there is useful work ng for them, but it does not seem to have red to either of these august bodies that est way to make use of an architect is to him on work for which he has been ally trained, and not upon work for which s not been trained, and for which he has ecial aptitude when he has been trained.

space permit I could give you a dozen ns why the average middle-aged architect t likely to develop into even an average tions worker, however long you train him. hole past life is against it.

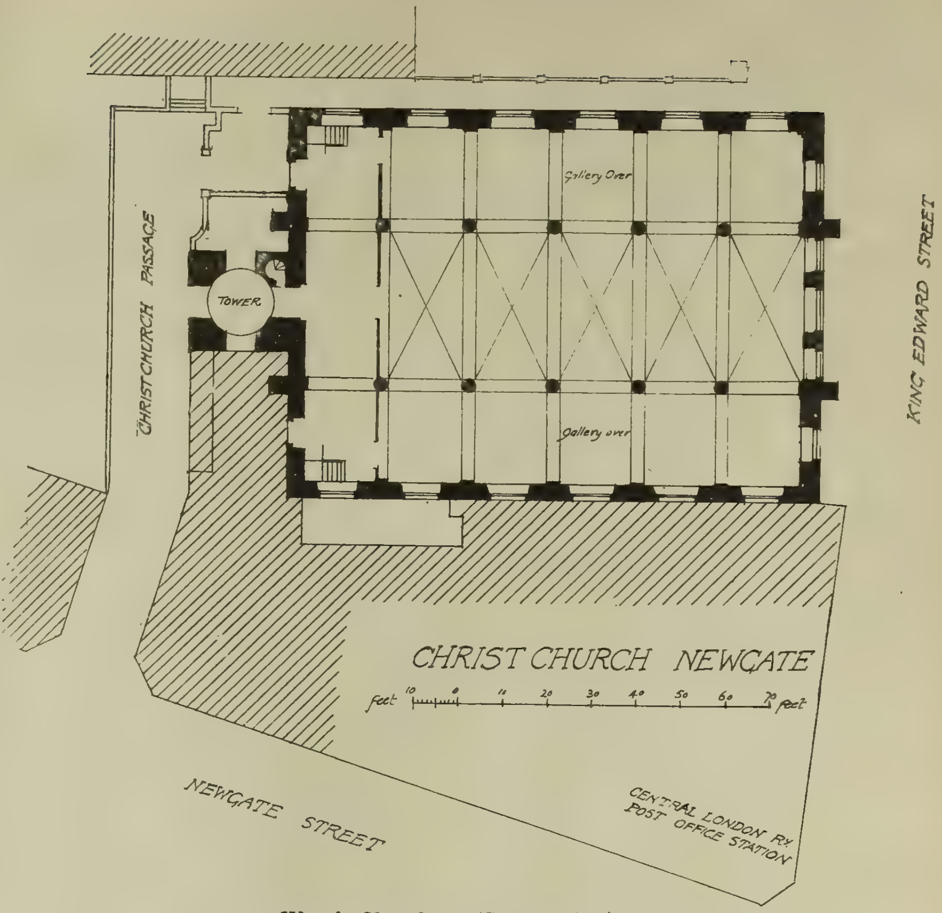
there were none of his own special work ng for him, his use even as an indifferent tions worker would no doubt be justified; here is special work waiting for him, as ave all known since the beginning of the nd as your columns now testify.

is time that this matter was put in order. ggest that instead of putting pressure istressed architects to force them into tion factories, where they would be of ecial value to the State, the Government l put pressure on their own departments rce them to employ all such architects e suitable on the design and supervision ar buildings, where they would be of me value to the State at this supreme of its existence.

m aware, Sir, of individual cases where ects have been and are being properly yed, but I am also aware of many more in which competent men have failed to mployment. In this connection it would eresting to know how many members of rps of Royal Engineers are at the present nt engaged in connection with building tions for the various Government depart-.

conclusion, Sir, I respectfully venture to st that the Architects' War Committee est serve both their profession and their ry by continuing to help all architects re in difficulties caused by the war till time as the State sees fit to use their es to put an end to the scandalous position ed to in your columns.

A. Z.



Wren's Churches. (*See page* 155.)
(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

Apprentices.

—I have followed with interest the s letters which have appeared in the r the last few weeks on the question of the of apprentices in the building trades, as me, while those letters have referred to trades, that the same conditions obtain in sections of the building industry. I know difficulty of obtaining apprentices in ry trades is exercising the minds of yers, but I had hoped some of your readers would have offered comment on this matter from the trade unionists' point of view. I may be wrong, but my impression is they seem to be ignored in letters referred to. This attitude of mind, I venture to assert, ignores the history of the controversies which have hovered round this question of apprenticeships. Further, it does not take cognisance of the tendency of the present time—*i.e.*, the increasing insistency on the part of organised labour to have a direct voice in matters pertaining to the industry in which it is related and forms an integral part.

Undoubtedly, the question of apprenticeship has to be faced. By all means use every effort to stimulate interest in it, but what those interested have to avoid is, in any attempts made to promote the object aimed at, not to arouse undue suspicion that such are prompted in the interests of employers or employed. There is great danger of running this risk unless some common understanding is arrived at between organised employers and operatives' unions. With this end in view I suggest it would be advantageous to all if joint deliberation and action were resolved upon.

If possible the mistakes of the past must be avoided. It will be found that a considerable amount of feeling resulted through the question of making provision to regulate the number of apprentices, the operatives aiming at this because they felt the employer was out to secure an unlimited number, with the object not so much to promote the real interest of the trade as to get an unlimited supply of labour. Once this situation arose it will be found the question of turning out efficient craftsmen who took a real pride in their calling became a secondary consideration. I am not concerned at the moment to apportion the blame, but to impress what in my opinion has occurred in the past, in the hope that any new effort made shall be the result of common action evolving from reasonable counsels; then I contend there is some hope in the future of producing a system embodying the best elements of all.

The scheme published in the *Builder* over the name of Mr. Costigan I am not prepared to comment upon at this juncture. There are one or two details which require consideration. The idea of the question forming part of our educational system appeals to me; but may I point out one important fact in this connection, viz., the branches of Federated Builders have local agreements with operatives' unions? In most of these provision is made regarding number of apprentices. If the Federated Builders father the scheme of the Builders' Institute, or any others which emanate from one interest in the building trade, what bearing will it have on the local rules in question? I venture to say the effect will be, if this course is pursued, that the operatives will have a suspicion that (most likely wrong) the employers are out to foist some principles into our educational system with a view to secure that unlimited supply of labour referred to. If I were a member of a public body and this scheme came before me, as a trade unionist I should not view it with that favour I should desire, because of its origin. There is not the slightest doubt trade unionists on public bodies would generally take up a similar attitude, hence the greater need for mutual understanding. I have at the time of writing no data to form a definite opinion, but the twelve or thirteen Metropolitan boroughs which favoured this scheme do not appear a good representation of the Metropolis.

There is one phase of this matter of apprenticeship which I hope will receive serious consideration. I refer to the importance from every point of view of the necessity for some measures to be taken to inculcate among our craftsmen a greater pride in their calling. Speaking of the old and at one time greatly respected trade of a stonemason, some of us view with deep regret the gradual deterioration in this regard. One reads of the care taken in ancient times to cultivate pride of craft. Can we look for a revival? What is the opinion of the architects and employers who are animated with something more in life than the pursuit of profit alone?

I know it is customary with many people when referring to this question of apprenticeship to speak in a disparaging manner of its product in modern times. It will be argued we are not producing the self-respecting skilled artisan of the past. I have heard it repeated that the modern mason is not up to the skilled workman of the past, and the deduction is drawn that the workman of the present period is to blame. I deny this statement of the case. The correct one is that, owing to the vicious environment in which the modern mason works, the tendency is to reduce him to a state where individuality is a minor quantity.

The reasons for this state of affairs are various. The elimination of the old employer who had direct contact with his employees, machinery, and keen competition among employers have created an atmosphere conducive to anything but respect for the trade to which they belong. This condition has reacted against the apprenticeship system in many ways. In one direction I have noticed a marked reduction in the number of masons, compared to a few years ago, who put their sons to the trade. Further, owing to the intensification of competition, that keen attention is not given to the apprentice which was the case in the past.

From what I gather the above condition of affairs obtains in most sections of the building trades. In pointing out some of the causes operating to the disadvantage of the apprentice system it is not with the intention of apportioning the blame to any particular interest, but rather an attack upon a system; also a friendly criticism of the policy being followed as indicated in the letters previously published in your columns. S. STRANKS

(Organiser, Operative Stonemasons' Society, South Eastern District).

Should Art Be Artless?

SIR,—Mr. Alexander Pirie, writing under the above title in your last issue, catches at what he considers some inconsistencies in Mr. Francis Bond's review of Sir Thomas Jackson's recent book on Gothic. He thinks thereby to overthrow the theory, usually held, that architecture up to the Renaissance was a progressive growth and the men answerable for the buildings erected cared only for their own period.

They could, of course, afford to neglect all others, because they had a living art and were not " blown about by every wind of doctrine "; but we, working under different conditions and without their thorough belief in their work, cannot, and consequently we require such books as those of Sir Thomas Jackson.

When architecture was a living style it was carried on in much the same way as a scientific manufacture is now—say, shipbuilding; naval constructors study what is being done now and improve where they can. They have nothing to learn from the ships of Drake, Rodney, or Nelson. Anything of the nature of a revival is, of course, out of the question. Architecture had a big revival at the Renaissance. A type had become thoroughly established in England when a whole series of small revivals set in. Every few years there was an upheaval and a fresh start. Dame Architecture no longer dwells in her own freehold house, but takes one on lease, and then—often leaves before the term is up. Recently there was a brighter outlook. The English tradition, broken by the Gothic Revival, had been successfully picked up when a bombshell was dropped, and the present bald and barracky style introduced. Instead of the charm of the English school we have an uninteresting monotony. In a few years there will be a yearning for something with more human interest and some suggestion of the picturesque, and another Gothic Revival is far from impossible. If it comes there will be a great rush to Sir Thomas Jackson's book.

Until architects agree to adhere to one suitable type, until they are masters of it and can mould it to meet all modern requirements and new materials, we shall have no salvation. Architectural students will have to rush all through the centuries, devour the " list of recommended books," and use the energy which should be expended on actual work in merely accumulating material.

W. T. H. LEVERTON,
Licentiate R.I.B.A., M.C.I.

Wren's Churches.

SIR,—It is pleasant to read of the widespread interest shown in your illustrated articles. I cannot but think that an announcement that later on they will be republished in book form would be acceptable to many readers. Their reappearance would afford an opportunity for the inclusion of additional matter, and if promised soon might be the means of evoking valuable criticism on those already printed.

The suggested preparation of models for permanent exhibition in St. Paul's is a sound one, and will, I hope, be carried out.

WILMOT CORFIELD.

SIR,—I have often thought when looking at Wren's model of his first design for St. Paul's, which is now stowed away in a portion of the Cathedral to which the public are not generally admitted, that it should be placed in a museum where it could be properly seen and appreciated.

Mr. Lindley Latham's suggestion is an excellent one; but why not the London Museum, Lancaster House, or the Guildhall Museum in the City, which is devoted to the history of London? Perhaps room could be found in one of these museums, and if Mr. John B. Thorp, whose excellent models of Old London are now one of the features of the London Museum, could be engaged to model Wren's churches I am sure that the exhibition as a whole would not only be of considerable value to the architectural profession, but would be of surpassing interest to all lovers of this great architect's work, to which you are now again drawing attention in these times of stress in the admirable weekly articles on the subject.

BANISTER FLETCHER.

SIR,—Mr. Fredk. Nesbitt Kemp having mentioned my name in connection with the proposed models of Wren's churches, and suggested that anyone interested in this work should see my models of the Old City Gates, I am writing to say that they are on view at my studio, 98, Gray's Inn-road, any day between ten and twelve and three and four o'clock.

JOHN B. THORP.

Public Memorials.

SIR,—I have read with very much interest and pleasure the articles on the " Liverpool Memorials." Whilst they have very ably dealt with the subject from an architectural point of view, I venture to think it would have given the general reader additional interest if the inscription that appears on each memorial had been given. Perhaps this can be done in future articles.

I think the question of the placing of inscriptions on our public memorials is one that should be more generally considered, as I am of the opinion that the present system is much too meagre. The following is an incident:—

The "Joseph Cowen" statue at Newcastle-on-Tyne was unveiled just on the eve of the Royal visit to the city in 1906, and it was quite common to hear from the crowd that inspected it, " Who was he ? " The inscription only says, " Joseph Cowen, 1829–1900."

W. T. HAYLER.

Pre-War Contracts.

SIR,—In your issue for February 4 last you publish a long account of a meeting of the Federation in regard to " Pre-War Contracts." And as I am deeply involved myself in a contract of the nature, which I have now completed, I should be glad if you could assist me in some way to associate myself with the measures the Federation are adopting to bring the matter before the necessary authorities. Do you think I could do this, not being a member of any Federation of builders, as I would like for my own sake, and incidentally add to the evidence already acquired, to in some way bring my case before some other body. I have been very badly dealt with over a contract entered into in April, 1914, amounting to £18,000, on which I have lost £2,300 through the war, and the Council are in agreement that this is so, but decline to make me any allowance whatever, notwithstanding the fact that I was given a good many reasons during the war to believe that I should receive fair treatment at the end.

I have to say that this is the first contr that I have carried out of any size, and t it has swallowed up all my working capit which took ten years to get together, and a leaves me with a deficit that I cannot meet, a this means ruin and bankruptcy.

I therefore think that it is absolutely unf that a local authority should benefit in t manner to this extent and to an individual l of this nature. I am further advised lega that I have a good case to take to court, am unable to find the necessary money n to fight. H. T.

[*** We should advise the writer to co municate with the Federation of Mas Builders with a view to joining.—ED.]

Housing, Andover.

SIR,—I have read your interesting " Note. It is not a question of want of land, nor money. There is no doubt, as some of us w have houses are aware, that there is a v great demand. The items that block the w are scarcity of labour and cost of materials, a delay in getting materials when they ordered.

Railway companies are not always as acco modating as they might be. Trucks of materi are sometimes delayed for weeks, then seve are rushed in all at once, and if not clear demurrage is charged, and there is no redr for delay, which scarcely seems fair to builders merchants. Houses are good investments, a as soon as labour can be obtained there every probability that more will be bui Probably Andover is not the only town wh houses are required. COUNTRY BUILDER.

THE LONDON COUNTY COUNCIL.

THE usual fortnightly meeting of the Lond County Council was held on Tuesday in t County Hall, Spring-gardens, S.W., Mr. Cy Jackson, Chairman, presiding.

New County Hall.—In a Report submitt by the Establishment Committee, it was stat that a letter has been received from the Minist of Munitions of War, stating that the Minist of Munitions has found it necessary, in vie of the great shortage of labour for the co struction of munition factories, to give dire tions for the immediate discontinuance of t work now in progress at the new County Ha and that he has notified the contracto Messrs. Holland & Hannen & Cubitts, Lt accordingly.

Evelyn-street Depôt.—Accommodation f Trailer-Cars.—The Highways Committ recommended that tenders be invited fro selected firms for the execution of the wo in respect of the adaptation of the Evely street, Deptford, tramways depôt for t accommodation of trailer-cars.

The Geffrye Museum.—It has been arrange for the exhibition at the Geffrye Museum (*a*) the panelling removed from two rooms No. 8, New Inn; (*b*) a bronze coin mould foun in the excavations on the site of the old Gener Post Office, St. Martin's-le-Grand, believed be a forgery dating from the first century and (*c*) a plaster ornament from over the fro entrance to No. 17, North Side, Clapha Common.

Memorial.—It was reported that the memori to the late Sir W. S. Gilbert has been erecte on a pylon on the Victoria-embankment to t east of Charing Cross Pier, and the Loc Government Records and Museums Committ have made arrangements for its maintenance

Charing Cross Railway Bridge.—In reply questions asked by Mr. J. D. Gilbert, t Chairman of the Parliamentary Committee sa that that Committee had considered the pr posed insertion in the Bill promoted by t South-Eastern and Chatham and Dover Railwa Company of a clause dealing with the appea ance of the Charing Cross railway bridge, b had come to the conclusion that, as Parliame could not reasonably be expected at prese to force the company to incur expenditure that connection, the clause should not proceeded with.

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* See issue for January 28, page 83.

ENERAL NEWS.

Steel Trade Amalgamation.

is stated that provisional arrangements just been completed for the purchase by rs. Pease & Partners, Ltd., Darlington, works and undertaking of the Teesbridge Company, Ltd., of Stockton-on-Tees.

R.I.B.A. Examinations.

e Council have given notice that the mediate and Final and Special Examina- will be held once only this year, viz., ntermediate from June 2 to 9; the Final Special from June 22 to 30. A notice ting the sending in of applications, ngs, and fees will appear in due course.

Guinness Trust Housing Scheme.

e report of the Guinness Trust for 1915 s that the capital amounts to £492,780. buildings continue to let well, the value e vacant tenements being under 1 per of the gross rental. On December 31 were 8,504 persons living in the Trust ings, 802 men, usually living in the ngs, being away serving in the forces. rustees have now provided 2,565 separate ings, containing 5,325 rooms, besides s' sheds and perambulator sheds. The ngs proposed to be erected on the ington Park-road site will be commenced n as conditions permit.

The London Fire Brigade.

Fire Brigade Committee, in a report to ondon County Council, submit statistics ve to the work of the brigade during 1915, comparisons for the preceding year. The s for last year include fires, deaths, etc., d by aircraft attacks :—

	1915.	1914.
.. .. ..	6,167	6,125
.. .. ..	3,595	3,509
ns fires	97	63
ney fires	645	557
ns caused through s, explosions, etc. ..	205	100
nated monetary loss sed by fires, explo- ns, etc.	£1,029,908	£555,750

Directory of British Manufacturers.

e Russo-British Trade Exchange, Ltd., of egent-street, W., send us a copy of a tory of British Manufactories for Russian , the first authentic directory of British facturers published in Russian, which is hed at 5s. It consists of about 400 , with trade headings in English and an, with a brief supplement entitled lights on Russia," by R. A. Lenski, ning statements of commercial facts g to Russia and other information. usso-British Trade Exchange, Ltd., also takes to furnish reports on the standing ssian firms and advertising in Russian ls, and to give expert advice on questions g to Russo-British trade. We think the ory should fill a present and future want s country.

Rebuilding in Belgium and France.

read that the Belgian Government have to Mr. J. J. Hill the task of reconstructing ilways and buildings in Belgium after ar, and that the French Government onstituted an inter-Ministerial Committee er to provide ways and means for re- ucting destroyed or damaged buildings ant. M. Revault, Deputy of the Meuse, ndertaken to frame a general scheme rations for the Committee of representa- f the Ministries of the Interior, Commerce, ndustry, Agriculture, Labour, Finance, Arts, Colonies, and War. As an initial I. Revault proposes to establish depart- workshops, to be subsidised by the for the making of models adapted to eeds of various trades and professions, e recommends that all children, from n to sixteen years of age, of refugees be at once taught the rudiments, at of the trades which they will hereafter on, and that thus a fresh supply of en should be set up.

"Harper's Magazine."

Harper's Magazine for February contains several interesting articles, including :—"Adrianople Between Wars," by Mr. H. G. Dwight, with photographic illustrations; and "The City's Ragged Edges," by Mr. Simeon Strunsky, with illustrations by Mr. W. J. Duncan, which deals with the transition of towns into cities.

Institute of Industry, Ltd.

The Institute of Industry (of Great Britain and Ireland) has appointed a Special Committee of its Court of Directors to meet representatives of important trade interests, with a view to considering suggestions having for their purpose the strengthening of the Court of Directors and the co-operation or amalgamation of other similar movements. The Committee appointed is as follows :—Mr. F. J. Nettlefold (Chairman); Sir Clifford J. Cory, Bart., M.P. (Messrs. Cory Bros. & Co. Ltd.); Sir James Heath, Bart. (Messrs. R. Heath & Sons, Ltd.); Mr. Godfrey C. Isaacs (Managing Director Marconi Wireless Telegraph Company, Ltd.); Mr. Frank Warner (President the Silk Association of Great Britain and Ireland).

Building Materials, etc., for Russia.

The British Vice-Consul at Moscow (Mr. E. B. St. Clair), in calling attention to the great demand that will arise in Russia after the war for manufactured goods of every description, points out that the following goods were formerly imported from Germany and Austria-Hungary on a large scale :—Building materials and requisites: Tiles, majolica, terra-cotta, locks, and sanitary goods and fittings. Machinery and tools: Power plants, pumps of every description, motor-cars and spare parts, etc. Scientific instruments, etc.: Astronomical, physical, drawing, and other scientific instruments. In this connection reference should be made to the Memorandum on the "Possibilities of British Trade with Russia," appearing on pp. 468–473 of the *Board of Trade Journal.*

The Relation of Sculpture to Architecture.

The Cambridge University Press will publish very shortly "The Relation of Sculpture to Architecture," by Mr. T. P. Bennett, A.R.I.B.A. English sculpture and English architecture have in the past fifty years been at a disadvantage owing to their unsuitable surroundings, and when used together they have often lacked the important quality of unity. The book contains 110 illustrations of buildings and monuments which show a successful combination of the plastic arts, and the result of the study of many others is added in the text. Sculpture in a variety of positions receives consideration, and the placing of monuments is discussed, besides sundry minor matters which are inseparable from monumental work. The pages of this volume will be found specially useful at the present time, in view of the discussion of the question of war memorials.

The Neglect of Science.

A memorial, presented by Mr. Arthur Acland, Chairman of the Executive Committee, and Sir Alfred Keogh, Rector (now acting as Director-General of the Army Medical Service), of the Imperial College, and Sir John Wolfe-Barry, Chairman of the Delegacy of the City and Guilds (Engineering) College, has been forwarded to Lord Crewe, Chairman of the Governors of the Imperial College :—The memorial supports the Memorandum on the neglect of science in this country which was signed by thirty-six eminent men of science and published on February 2 last, and points out that the Imperial College is directed by its charter to concentrate itself on "science in its application to industry and to give the highest specialised instruction and provide the fullest equipment for the most advanced training and research." It recalls as being true to-day a statement by the late Professor Huxley, that there was "hardly a branch of trade or of commerce which did not depend, more or less directly, upon some department or other of physical science, which did not involve, for its successful pursuit, reasoning from scientific data."

A Deceased Contractor's Estate.

Mr. James Archibald Ewart, of Old Queen-street, Westminster, and Beckenham, Kent, contractor, who died on November 23, has left estate to the gross value of £36,355, of which the net personalty amounts to £33,469.

An Architect's Bequests to Hospitals.

We understand that Lieut.-Colonel Florence, V.D., whose death we record on page 160, has left important bequests to several London hospitals. The Trustees of the National Gallery are empowered by his will to select any of his pictures which they consider worthy of a place in the National collection, and he has also left a sum of money to the Trustees.

The R.I.B.A. Gold Medallist.

A special general meeting of the R.I.B.A. will be held on Monday to elect the Royal Gold Medallist for the current year. The Chairman to move :—"That, subject to His Majesty's gracious sanction, the Royal Gold Medal for the promotion of architecture be presented this year to Sir Robert Rowand Anderson, LL.D., F.R.S.E., in recognition of the merit of his executed work, his services to architectural education, and his high character and lofty ideals in the art of architecture." Designs and drawings by the late W. Burges, A.R.A., for his house in Melbury-road and the decoration, fittings, and furniture are on view in the West Gallery.

The Shrine of Edward the Confessor.

A meeting of the Society of Antiquaries was held at Burlington House recently under the chairmanship of Bishop Browne. The Rev. H. F. Westlake read a paper on a recent examination of the shrine of St. Edward at Westminster Abbey. He said that certain measures necessary for the protection of the shrine in these troublous days had required the temporary removal of the wooden superstructure, exposing to view the cavity in which rests the coffin of the saint. Micklethwaite said that the shrine was destroyed by Henry VIII., but Sir Gilbert Scott was of opinion that the marble superstructure was taken down and only far enough to allow of the removal of the body, and he (the speaker) was inclined to think that Scott was correct. Feckenham, in his brief tenure of the revived abbacy of Westminster, seems to have replaced the body and set about the restoration of the shrine, the work occupying only twenty-two months and being hastily done.

The Board of Architectural Education.

The Council announce that the preliminary examination for the registration of candidates as probationers will be discontinued. Candidates will for the future be required to submit any of the following certificates, as may be satisfactory to the Council :—The Matriculation Examination at any University in the British Empire; the Senior or Junior (Honours) Local Examinations conducted under the authority of any University in the British Empire; the School or Leaving Certificate of the Oxford and Cambridge Schools' Examination Board; the examinations held under the Central Welsh Board; the Examinations for the First-class Certificate of the College of Preceptors; the Senior or Junior School Examination or the Matriculation Examination of the University of London; Senior School Certificate or a School Certificate of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield; the School Certificate of the University of Bristol. Candidates who have obtained a success in any of the Board of Education Examinations in Art held in 1913 and subsequently will be exempted from "Geometrical Drawing and Freehand Drawing from the Round." The following Certificates from the Board of Education, South Kensington, are accepted as exempting from Elementary Mechanics and Physics :—A first class in the two Board of Education Examinations: Subject 6, Theoretical Mechanics, A. Div. 1, Solids; B. Div. 2, Fluids; Stage 1. Candidates who do not possess the Board of Education Certificates will be required to submit with their applications drawings showing their knowledge of either Geometrical drawing or Perspective, and Freehand Drawing. All applications for registration as probationers must be accompanied by a fee of two guineas.

Leading Contents.

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ILLUSTRATIONS.

St. Paul, St. Bride, and St. Mary-le-Bow.

WE illustrate three fine views from photographs taken by Mr. George Trotman, and kindly lent to us. The view of St. Paul's taken cannot now be obtained. They are given in connection with our series of articles on London churches.

Wren's Churches.

WE give reproductions of two plates of St. Nicholas Cole Abbey and St. Mildred, Bread-street, from "The Churches of Sir Christopher Wren," by J. Clayton, published by Messrs. Longmans, Green, Brown, & Longmans, which we give by the courtesy of Messrs. Longmans, Green, & Co. Further notes on St. Nicholas Cole Abbey will be found on page 155, and on St. Mildred, Bread-street, in our New Year's Number.

St. Fé Railway-Station, San Diego, California.

BY the courtesy of the *Brickbuilder* we illustrate this fine architectural group of buildings, which show what we lose here because most of our railway-stations are treated as adjuncts of engineering schemes instead of what they should be—a legitimate branch of architectural design.

St. Pancras Station.

WE give a reproduction of the admirable coloured wood-cut of M. Emile Verpilleux, which, designed for a poster, gives an impressionistic effect of the sense of space and chiaroscuro of the huge iron roof.

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MEETINGS.

FRIDAY, FEBRUARY 25.

Glasgow Royal Technical College.—Mr. James Boyd on "Descriptive and Practical Geometry." 7.45 p.m.

MONDAY, FEBRUARY 28.

Royal Institute of British Architects.—Special and business meetings. Election of Royal Gold Medallist. Election of members. 4 p.m.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher on "Inigo Jones and His Works." 4.30 p.m.

WEDNESDAY, MARCH 1.

Carpenters' Company.—Mr. D. S. MacColl on "The Work of Alfred Stevens." 7.45 p.m.

Institution of Civil Engineers of Ireland.—Ordinary meeting. 8 p.m.

Royal Archæological Institute (at Burlington House, Piccadilly).—General meeting. 4.30 p.m.

University of London, University College.—Professor Adshead on "The War Memorial as a Monument on a Battlefield, as a Mausoleum, or as the Tomb of a Military Hero." 5.30 p.m.

Institute of Sanitary Engineers (Sessional Meeting at Caxton Hall, Westminster).—Lieut. Bernard R. Hebblethwaite, A.R.I.B.A., 2nd London Sanitary Co., on "Sanitary Work at the Front with the Expeditionary Force." 7 p.m.

THURSDAY, MARCH 2.

The Royal Institution.—Professor L. W. King on "Recent Excavations in Mesopotamia." 3 p.m.

University Extension Lecture (at the British Museum).—Mr. Banister Fletcher on "Roman Palaces and Pompeian Houses." 4.30 p.m.

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OBITUARY.

Mr. H. L. Florence.

We regret to announce the death, on February 17, at Bath, after a short illness, of Mr. Henry Louis Florence, of No. 9, Princes-gate, Hyde Park, S.W., and No. 16, Royal-crescent, Bath, in his seventy-fifth year. Mr. Florence was Soane Medallist, 1869; he was elected in 1865 an Associate, and in 1878 a Fellow, of the Royal Institute of British Architects; he served as a member of Council and as Vice-President, 1897–9. He became a member of the Architectural Association in 1862, and served as President. He was elected also a Vice-President of the Architects' Benevolent Society, 1914–16, in which he manifested great interest, as evinced by both his active work as a member of the Council and his generous contributions, which included a gift of £1,000 City of London Corporation Bonds, to its funded property. He was Master of the Haberdashers' Company, 1914–15.

Mr. Florence practised at No. 3, Verulam-buildings, Gray's Inn, W.C., in partnership with Lewis Henry Isaacs, F.R.I.B.A., F.S.I., who died on October 17, 1908. Of the most important architectural works carried out by them we may mention the (old) Holborn Town Hall, Gray's Inn-road, with subsequent improvements and decorations (December 13, 1879*); London and Joint Stock Bank, Paddington branch (May 31, 1879*); Nos. 7–8, Bell-yard, Fleet-street (February 24, 1883*); the Northumberland-avenue—renamed the Victoria—Hotel (May 1 and November 6, 1886*); warehouses in Rochester-street, Westminster, for Messrs. J. & W. Farmiloe (August 7, 1886*); the Empire Hotel, Kirkley Cliff, Lowestoft (July 26, 1898*); and the Holborn Viaduct Hotel and Station (June 17, 1876*). They were the architects of the two houses built on the site of Nos. 13–5–7, Delahay-street, Westminster, for Mr. Edward Lloyd; houses in Carlos-place, Mount-street, W., for Mr. G. Fosta, 1894–5; the Carlton Hotel, Pall Mall, 1897–9, as carried out by them after the death of Mr. C. J. Phipps, and in accordance with his drawings; premises for Messrs. Woolland Brothers on the sites of Nos. 1–7, Lowndes-terrace and 1–3, Seville-street, Knightsbridge; enlargement, in 1900, of the First Avenue Hotel, High Holborn, W.C.; and in 1905 the alterations and improvements of the United Service Clubhouse, Pall Mall; the Coburg Hotel, Mayfair; King Lud tavern, Ludgate-circus, E.C. (April 1, 1871*); London and Joint Stock Bank, St. John-street, Clerkenwell branch (February 24, 1872*); Cadby's pianoforte factory, Hammersmith-road (December 26, 1874*); and the Paddington Baths and Washhouses, Queen's-road, Bayswater, 1893, since pulled down for Whiteley's premises; No. 1, Little James-street, Bedford-row, W.C.; and the improvements and alterations of "Keith House," Bayswater-road, for Sir C. Robinson; the new library, pension-room, and classrooms, Gray's Inn, with restoration of the Inn Hall; offices, Salisbury-square, Fleet-street, for Edward Lloyd, Ltd.; "Coombe House" and "Coombe Farm," near Croydon; St. James's Park railway-station for the Metropolitan District Railway; Queen Victoria Memorial, Kensington High-street; Institute of Journalists, Tudor-street, Whitefriars, E.C.; and library, museum, and improvements, Freemasons' Hall, Great Queen-street. W.C.

The funeral service was fixed for Wednesday last at All Saints' Church, Ennismore-gardens, Princes-gate, followed by interment at Nor Cemetery in the afternoon of that day.

Mr. Florence was the eldest son of the J. H. Florence, of Streatham, and a Fello the Geological Society. He was R Academy Travelling Student and Medallist, 1870; he studied in the At Questel, Paris, and travelled in Italy. 1892 he retired as a Volunteer officer with rank of Lieut.-Colonel, and received Volunteer decoration. He was a memb the Arts and the Junior Athenæum Cl music and travel were his recreations.

Mr. J. Park.

Mr. James Park, building contra "Floradale," Cranford-road, Aberdeen, recently died as the result of injuries rec in a tramway accident, was a native of Buchan district. Mr. Park was concerne the work of opening up Ashvale-place, U grove, Rosemount, the Mannofield district, several other of the newer areas of the city. Inverurie he had a large share of the bui work. One of his most recent impo contracts was the erection of the mansion h of Tillycorthie, together with the stea and numerous cottages on the estate. also erected the public hall at Udny.

Mr. J. H. Shaw.

The death is announced of Mr. Jo Howarth Shaw, retired builder, "St. Alba Skircoat Green-road, Halifax. Deceased, was sixty-four years of age, built a great of the property in the Westbourne es Salterhebble, and also at Skircoat Green.

Mr. C. A. Hayes.

The death is announced of Alderman C Hayes, ex-Lord Mayor of Bristol and of Messrs. C. A. Hayes & Sons, builders.

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BOOKS RECEIVED.

LOCKWOOD'S BUILDERS' AND CONTRACT PRICE-BOOK, 1916. (London: Cr Lockwood & Son. 4s.)

ANTIQUITIES OF IONIA. Published by Society of Dilettanti. Fifth Part, bein supplement to Part III. (London: Macm & Co., Ltd. £4 4s. net.)

PRATT AND REDMAN'S INCOME TAX I Ninth edition. (London: Butterworth & 9s. 6d. net.)

DIRECTORY OF BRITISH MANUFACTU FOR RUSSIAN TRADE. Printed in the Ru language. (London: Russo-British T Exchange, Ltd. 5s.)

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FIFTY YEARS AGO.

Underground Railways for Paris.

THE French metropolis has just placed in a state of great excitement by project of M. Edoux, the civil engi who proposes to effect as great a revolu under that city as M. Haussmann, Prefect, has done above ground. His is to construct a system of subterranean ways diverging from the Palais Royal as common centre and connected at their by an outside circle. One line is to go d the Rue de Rivoli, under the Place d Madeleine and the Rue Tronchet to railway terminus of St. Lazaire; anothe to go under the central Market-halls thence either under or over the Seine to terminus of the Orleans railway. From Market-halls a branch is proposed to carried under the Boulevard de Sebast and the Boulevard de Strasbourg to termini of the Northern and Strasb railways. A second branch is to go u the Boulevards and the Place de la Bas to the termini of the Vincennes and Lyons railways; and, finally, a line is jected from the Palais Royal, under Champs Elysées, to the Bois de Boulogn

[*** From the *Builder* of February 1866.—ED.]

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* Illustrated in the *Builder*.

AILWAY-STATIONS AND BRIDGES.

HERE are two architectural problems which have been surrendered to engineers, but which are pre-eminently tectural in their character, and must be ed for architecture if we are not in the e to have a world in which the effect of any ovement in architectural character is not ruined by the intrusion of engineering ions of problems which belong to con- tive architecture—we allude to bridges railway-stations. Railway-stations, big small, are among public buildings which most prominent and constantly visible r in the form of great terminal stations he small local station with its waiting- s, ticket offices, station-master's house, the bridges for passengers which pass over lines. None of these structures as a rule ssitate intricate calculations; they are le problems in which considerations of and mass and simple planning are alone ired. If engineers had the monopoly of non sense they would have a right to oyment which none could gainsay—if their was ingenious planning, such structures d fall within their scope; as it is, they outside it, while strictly appertaining to tecture. The foot-bridges over the rails, red or uncovered, could with little skill care be made pleasant to look at instead n eyesore, as is frequently the case, and introduction of ferro-concrete is a means eby the use of naked steelwork can be led when size and position make a wooden ture inadmissible. The corrugated-iron over the wayside station is unreasonable, use the station is not a temporary building, has the same claim to permanence as a e or municipal building, while the design loor and window openings and the con- ation of proportion are as important as in ase of any other buildings. Where archi- have been employed in such work in and, as in the case of many of the stations e Midland Railway, there are signs that have been pushed too much into a rdinate position by engineers, and we have examples to compare with the railway- ons of America, which have in large ure been treated as legitimate subjects for employment of skill in design. The case he architectural treatment of great terminal ons, usually combined with hotels and adjuncts, is if anything even stronger; compared with other buildings in our s, they are usually imposing on account oth size and position, and the intricate ing and arrangement required renders treatment an architectural problem of irst order. There is little chance of these ems being sufficiently considered as long e railway companies, aided by the interests h they can control in Parliament, are ed to obtain powers which enable them cape the control of the local authorities of entres in which their stations are placed, he companies are largely controlled and d by the advice of their engineers, and that advice is is demonstrated by the ay-stations throughout the land.

t less important than railway-stations are reat bridges of communication for road, and other purposes, and what the world st in picturesqueness and charm is shown e "Book of Bridges" by Mr. W. Shaw ow, which is admirably illustrated by ductions in colour and line from drawings r. Frank Brangwyn.* From the point of of the student the book is written in too rsive a style and lacks completeness, it illustrates not the great bridges of the so much as those bridges which Brangwyn has chosen as subjects for his rations. Thus we miss Waterloo and nond Bridges, and that great monument sthetic skill, the Pont Alexandre III., , with the Gare de Lyon, show what rn French architects can accomplish njunction with engineers. Nor does that masterpiece of modern engineering at its best—the Forth Bridge—form a subject for illustration, as it well might do as an illustration of what is best in modern design, for the book is principally a lament of the failure of the modern world to carry out the tradition of architectural achievement of the past without the critical and analytical discussion of the principles by which we can make good the failures of the last century. Mr. Sparrow makes a great point of the failure of modern bridge-builders to recognise the fact that a bridge is easily destroyed, and that means should be taken as of old by fortification to render such destruction difficult, if not impossible. This point of view assumes that the modern, like the ancient, world should prepare itself for the possibility of war, an assumption which is only justified if we hold the present struggle to be an ordinary and not an extraordinary incident in the history of modern civilisation. Believing as we do that the war is due to the gigantic miscalculation of Germany as to the nature of modern conditions, and the belief that it is possible by brute force to set back the hands of the clock for centuries, and by blood and iron build a barrier against modern progress, it may well be assumed, when the attempt has definitely failed, that future progress will make its renewal an impossibility. The issue is simply the re-establishment of barbarism, aided by all the inventions of modern science, or the final establishment of a greater Pax Romanum for the civilised world in which fortified bridges will have no more place than strategic railway lines. The problem of bridge-building in the future seems to us to depend on the manner in which architects and engineers can learn to work together and the extent to which the naked steel constructions of the nineteenth century can be replaced by ferro-concrete, brick, or masonry constructions; for we must recognise that in iron and steel we use materials which, like wood in the past, are perishable, and which depend more than wood on constant attention and painting to preserve their safety. With the recognition of these facts we shall come to the conclusion that the short-lived reign of the engineer as the sole designer of bridges is at an end, and that they should be restored to the realm of architecture to which they belong, but that in these days of colossal schemes architect and engineer are dependent on each other's knowledge and skill, the problems of the modern world demanding co-operation rather than rivalry between two allied professions, neither of which can be independent of one another.

There is room for a great work on bridges in which the works of the past will be illustrated and adequately described and the evolution of a great branch of constructive design shown; but this does not do away with the value of a book which, though not dealing with technical matters, shows the lay reader how important and interesting the subject is. Among many delightful studies of colour we may mention the Pont Henry IV. over the Vienne at Châtellerault in France, built by Charles Androuet de Cerceau in 1564–1609, which formed one of the latest of the Bastille bridges, the Pont Valentré at Cahors-sur-Lot, an example of the fortified bridges of the thirteenth century, and a wonderful illustration of the Alcántara at Toledo.

But it would be difficult to weigh the relative merits of the magnificent series of thirty-five colour plates and thirty-five pen-and-ink sketches with which the volume is illustrated; they would speak for themselves without the accompanying letterpress, and show us the paramount value of design in a field of the greatest importance to those who can respond to the appeal which beauty has for most of us. They form an urgent appeal to those who feel that after the present strife modern Europe should be made a more beautiful and happier place to live in than we dreamed of before.

A Book on Bridges." Pictures by Frank wyn and text by W. Shaw Sparrow. (London: Lane. 21s. net.)

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DAYLIGHT SAVING BILL.

In the House of Commons recently, Mr. Asquith, in reply to Mr. Peto, who asked whether the Government proposed to introduce a Daylight Saving Bill, said: "I am afraid I cannot introduce legislation on this very contentious subject."

THE CARPENTERS' HALL LECTURES:

SOME MOVEMENTS IN MODERN ART.

ON Wednesday, February 16, Mr. William Strang, A.R.A., gave an interesting lecture on "Some Movements in Modern Art," in which he gave an admirably clear and concise summary of a subject upon which few but artists and a small number of art critics have sufficiently definite ideas. Art, he said, cannot be rightly judged unless we know the intention which lies behind the artist's endeavours, and the definition of schools of artistic thought must enable us to appreciate better the work of the individual artist. Art is not a progressive improvement in excellence, and does not depend, like science, on the accumulation of actual knowledge, but is an individual means of expression, and in that way is like the art of language. The desire to create in all ways a new art is doomed to failure, as all art of value must grow, whether by development or rebellion, out of what has gone before, and this process has gone on in art with one exception. Lack of authority and tradition may be a great evil, as artists will not achieve so much as if they were working together. It also often results in cringing art, servile, and seeking by any means for public approval and favour by freakish methods. But it is impossible to expect art to have ideas greater than are prevalent in its own time, and when individual anarchy is carried to such lengths as at present it is impossible to expect anything great in art.

Great art may be pictured as being independent of the goodwill or patronage of majorities or minorities, aristocratic and dominant, ignoring approval or disapproval. Such godlike art has not existed in modern days, in fact since the great and austere art of Egypt, whose art was calm, simple, and dictatorial, and seems to be a standing reproof to the petty little vices of individualism.

There is no trace of pleading for approval in it, no sign of seeking to please; it is aloof, and seems to put the onus of sympathy or admiration on the beholder, and it imposes itself on the human imagination as no other art has done.

It must be remembered in speaking of movements that a movement sometimes occurs and flourishes in one country, but the idea originates with a single artist in another country, such as was the effect of Constable in France. Each movement has not a separate period, but movements overlap, and two may flourish concurrently in the same country.

We in England have never suffered from Classicism as most other countries have. France alone has produced under it great works which will live, and David in the first period in his portraits, and Ingres in the second, also in his portraits, have survived an influence which in other countries was barren of good results—both succeeded in a branch of art which requires more naturalism than any other. Where in England definite foreign influences can be traced, as in landscape painting, they were rather from Holland than from Italy, and Rembrandt, Ruysdael, and Hobbema have been the forces which have moved English artists. Holland itself had a period of Italianised painting, but its works are not remembered. Spanish art came under the influence of the Low Countries, and at a later period of Italy, but neither of these influences produced works of great merit, while the art which is indigenous to Spain and was distinguished by uncompromising naturalism has retained its place and is still a living force. Velazquez returned from two visits to Italy absolutely untouched by its influence, and El Greco, though a foreigner living in Spain, was characteristically Spanish; as was Goya, who lived at the end of the eighteenth century.

The Pre-Raphaelites.

The most noticeable body of modern painters in this country were the Pre-Raphaelites, who started in 1850 with three or four members, young, enthusiastic, and clever, with a fresh gospel, or rather an old one adapted to modern performance. Rossetti, Holman Hunt, and

Millais were the originators of the movement, the theory underlying which was that art should be based on nature and truth, which, in view of the conventional art of the time, was an undiscovered country. They considered that the natural truthfulness existing in Italian art till the time of Raphael had gone, and that later conventions had eliminated truthful expression. They did not copy the old Italian pictures they admired, but tried to discover the principles governing them. They did not believe in giving a general impression of any subject, but, while copying all details, still tried to retain the larger effect and significance of the picture. They founded a magazine to defend their theories, which had Ruskin's powerful support. The ideas of the founders of the movement, bred in a tumult of spirit, as interpreted by their followers frequently showed signs of exhaustion, for a painter can seldom make full use of an idea which is given to him. Ford Madox Brown and Burne-Jones were younger members of the brotherhood, whose work was strongly individual; all were strongly influenced by poetic literature, and much of the best work done took the form of illustrations to literary works. Rossetti was both poet and painter, and his poetry has been an inspiration to later painters. The Bible was a fruitful source of inspiration, as it was to Rembrandt, and it is well to observe the different standpoints: Millais was more of a realist than the others, while Burne-Jones was less of a realist than any of them, and with William Morris was closely connected with the arts and crafts' movement; Holman Hunt and Ford Madox Brown were closely allied; Hunt had a deeply religious character, and Madox Brown a great dramatic sense. Outside this movement were Watts and Alfred Stevens, who comes nearer the definition of a great artist that this country has yet produced, for he was painter, sculptor, architect, and designer, and magnificent in all. Watts's work was based on Venetian art, and their gorgeous work was echoed in his pictures.

The Romanticists.

About this time a revolt occurred in France against existing forms of art, and the Romanticists fought against Classicisim, and went to extremes both in art and literature. Gericault and Delacroix were typical of the school, and when Delacroix's picture, "Dante's Barque," was exhibited it was seen that the revolt against Classicism was complete. Owing to the influence of Constable and other English artists, they devoted themselves chiefly to landscape. Rousseau, Corot, Diaz, and Daubigny may be mentioned as successors to Gericault and Delacroix. Constable saw vividly and with delight that trees were green and skies were blue, and all nature had a brilliance and sparkle that tradition had never noted, and which he threw overboard. He was the first to get the effect of light and air, and all this was studied not for the sake of realism, but for the expression of a "mood" in landscape, mood meaning a human feeling which one would not think nature possessed, but "mood" is nature plus the painter. Thus it was that Constable appealed to the new French school, whose strong point was their feelings. Daumer and Gavarni were the greatest of those who were called caricaturists. Daumer was also a great painter, and his series of pictures of Don Quixote are the most human caricature of all time. Jean Millet did for the country what Daumer did for the city, the former drawing with sympathy the outcasts of the city, the latter the peasant. He did not escape the danger of sentimentalism. The last of this generation of painters was Legros, whose art was severe and dignified.

Realism.

Most modern movements in art owe their origin to the French, and no means were considered too violent to draw attention to the new creed of realism—historical painting was considered nonsense, style humbug, by Gustave Courbet, the apostle of the new creed. Bastien-Lepage followed, carrying naturalism a stage further; he was more photographic in effect, and used a neater and tidier technique. Another artist of the school of peasants was L'Hermite, whose naturalism was more robust than that of Lepage, while his work suggests more careful observation.

Impressionists.

The new school followed the banner of revolt led by Manet, and devoted itself to the impressions made by things rather than to the appearance of things themselves, and since the accentuation of the planes disturb colour value the planes are almost obliterated in Manet's pictures. As a matter of fact Manet's manner was founded on Velazquez and Goya, though his manner is very different from theirs. Whistler more than Manet made atmosphere his chief aim; Degas was another great exponent of the school.

Post-Impressionists.

The last great movement was based on the assumption that representation had reached its highest development, and that a simpler convention was necessary to make a more direct appeal. Realism had had its day, and the reaction was in the direction of more primitive forms of art. Cezanne, Gangain, Von Gogh were representative of the movement, which in its aim at avoiding photographic representation went to great lengths. Cezanne was a pupil of Manet, and adopted his scheme of high tone and bright colour in his pictures. There is a tremendous impasto suggesting plastering and a wilful or helpless bad drawing.

The lecturer ended by devoting a few words to later developments, which he said constituted a complete break with the past, since all previous schools had been representative, while the new theory was that pictorial art should not represent any object, but by an arrangement of lines and colours produce an emotion without the use of any known symbol. The theory could never successfully compete with ideas founded on representation, while pictorial art must continue to be founded on representation however expressed.

THE BRITISH INDUSTRIES FAIR.

THE Board of Trade has done more to deserve its title since the outbreak of war than before, though its efforts have been partly neutralised by the consistency with which the Government have refused to make any unequivocal statement of what their attitude is to be when peace returns in important matters which are vital to the trader seeking for new markets. The compromise arrived at in regard to the dye industry has not given the same confidence to manufacturers that a frank promise of protection for nascent industries for a period following on the war would have done, nor can the special treatment applied to the dye industry be repeated on a large scale and applied to other trades.

The exhibition now being held at South Kensington is in all the circumstances of the time a creditable one in view of numerous obstacles. The exhibits are unduly crowded together, as may be expected until these fairs are held in a suitable building with adequate space. The exhibitors are handicapped to a great extent by the shortage of labour and material produced by the war, which in some cases will prevent their being able to accept orders which would be freely given; and, lastly, many buyers who would be present in normal times must be prevented from attending at the present time. Still, the support and enthusiasm with which the scheme of emulating the Leipzig Fair on British ground, to promote British trade, has been received enable us to look forward to the years of peace in which we shall see traders from all parts of the Empire attending a great annual fair which will be representative of the whole manufactured products produced in the Empire, together with the representatives of the great nations abroad desirous both of buying from and selling to us.

The present Fair only represents certain limited sections of British manufactures, those of toys, fancy goods, and stationery and printing. The amount of ingenuity and enterprise which have been devoted to toy making has produced very marked results, and gives promise that in future children will be able to dispense with toys "made in Germany," and means that the million and a half which said to be spent in foreign toys yearly will rema in the country. The immense variety and ing nuity shown in the design of every kind mechanical toy is full of promise for the futur and the workmanship and finish of many those shown leave little to be desired. W understand that the Central Committee Toy Industries has done a most useful wo in co-ordinating and assisting many sma and scattered industries.

The show of fancy goods is good and repr sentative, but there is room for the employme of more skill in design in many of the articl turned out, though they probably appe to popular taste as they are.

The glass and china section is a little di appointing, considering the great amount excellent design and workmanship which ca now be obtained, but it is probable that ma firms have not exhibited owing to the impos bility of executing orders now. Some of th finest work exhibited is that of Messr Wedgwood, who maintain the very hig standard which has always been associat with their name.

The "Moorcroft Ware" is excellent colour and design; the whole of it is han made on the potter's wheel, colour, glaze, an clay being fused together and homogeneous.

Rust's Vitreous Mosaic Company exhib some very good tile work, and also show phot graphs of some interesting mosaics whic they are executing for church decoration designed by Mr. Brangwyn. Pilkington Tile and Pottery Company, of Manchester, al produce some very excellent tiles.

All classes of glass work, including laborator glass and lenses, mirrors, and lighting glass, well as table glass, are included in the exhibitio and it is chiefly in the design of table gla that it would seem much leeway has to be mad up. It would be well if each of our man facturers were to form a little museum of o glass and study it, basing new designs on o tradition until a better school of design grow up automatically, as it would do, but in sayin this we must add that firms of the type Messrs. Osler, who represent modern design its best, are not among the list of exhibitors.

By far the most promising section of the Fa is that devoted to printing. The best Englis printing and colour work can hold its ow among any rivals, and the exquisite wor produced by the Medici Society, Ltd., Londo as shown in their Riccardi Press books, attai to the greatest excellence both in design an execution; their coloured reproductions of o masters are the best we have seen produce Messrs. Fisher Unwin show some very goo work of varied character, and among provinci printers may be mentioned Messrs. Solomon Whitehead, Ltd., of Birmingham.

Naturally, firms like Messrs. De La Ru Letts, the Fine Art Society, and others maintai the high reputation their work has alwa acquired.

We hope that the next Fair held will housed in a suitable building, and will embra the widest range of industries.

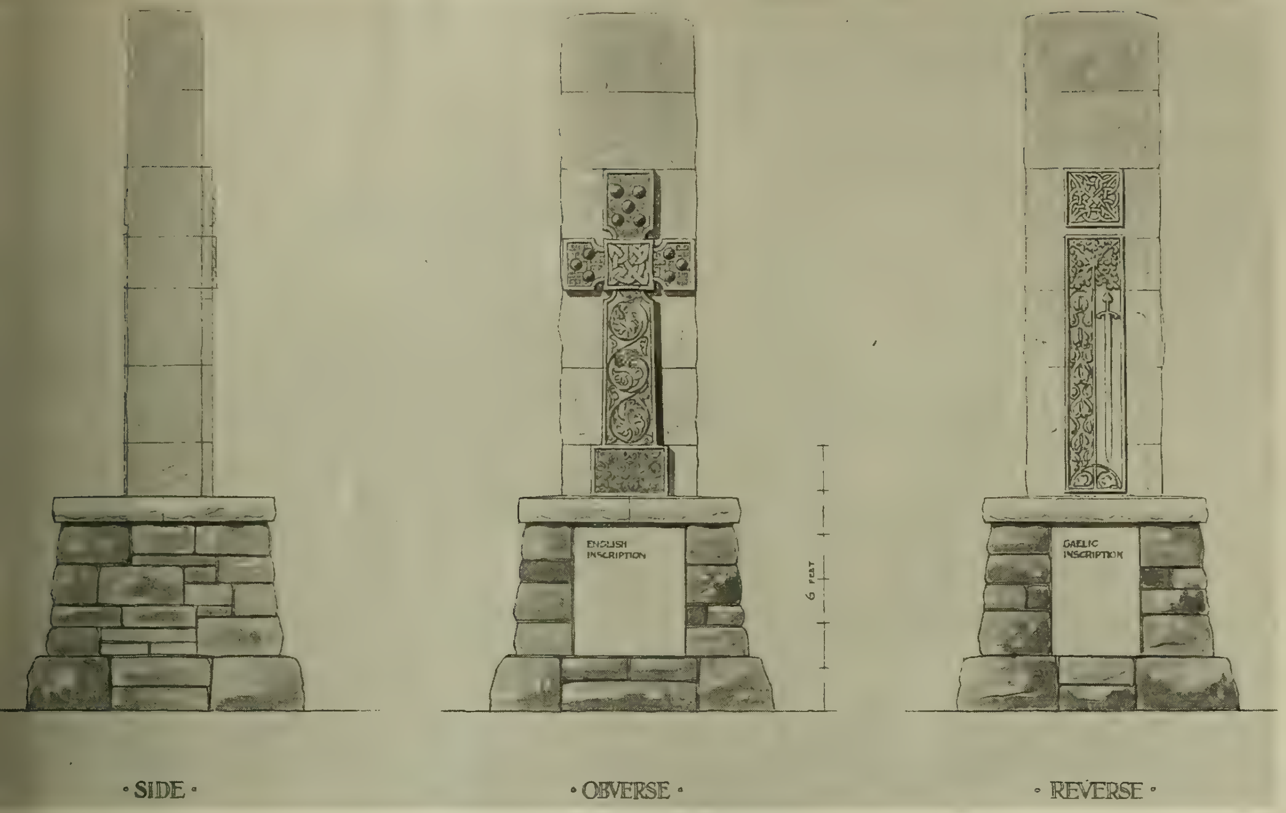
CELTIC MONUMENT, ARGYLLSHIRE.

THE accompanying illustration depicts monument about to be erected in Argyll commemorate the life and death of a Highlan officer who was killed in Flanders.

The monument is designed to find kinsh in a close degree with its surroundings, th chosen site being that of a sequestered sp in a peaceful glen guarded by rugged mountain

The enriched cross, emanating from th shaft of a natural-faced rock, whose top ha no defined limiting feature, symbolises a li cut short, in which the highest good has bee attained by the sudden call to the suprem sacrifice in the cause of truth and right.

The style of the work is Celtic, based upo the sculptured stones of Islay and the Scottis Highlands generally. The ornamentatio embodies the ancient spiral, fret and interlacin enrichments characteristic of the Weste examples. The structure will be carried o in the grey granite of Argyllshire. The archite is Mr. Colin Sinclair, M.A.



Celtic Monument, Argyllshire.

Mr. Colin Sinclair, M.A., Architect. (*See page* 162.)

BOOKS.

ometer Surveying. By W. E. Yorke
OT, A.M.Inst.C.E., F.R.Met.Soc.
ndon: E. & F. N. Spon, Ltd., 57,
ymarket. 1916.)

is a very practical work by an author
ughly conversant with his subject, and,
points out, is intended as an aid to the
nt to teach himself. He gives a most
lete description of the tacheometer—a
elaborate and complicated instrument—
is intended to take the place of the
ary theodolite level and chain, and
es the surveyor to ascertain the direction,
nce, and altitude of all points within
of the instrument from one set of observa-
taken with it, and thus save an immense
nt of labour in making surveys in districts
there are many undulations and
ions of surface. No pains have been
to render the work as complete as it
sible to make it, and the many examples
of the use of the tacheometer and other
ying instruments, with elaborate calcu-
s, are a testimony to the thoroughness
which the author has done his work and
mplete knowledge of his subject.

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s Architects' and Builders' Pocket Price-
k, 1916. Edited by Clyde Young,
.I.B.A., and Stanford M. Brooks,
.I.B.A. Forty-third edition. (London:
& F. N. Spon, Ltd., 57, Haymarket.)

e present time one can say little as to
alue of a price-book, and to attempt to
se the prices would be futile, as the
t varies so much week by week that it
ossible to fix anything like a standard.
work is in a very handy form. One
e that may be useful is the list of constants
our, and those we have been able to
re with the actual cost of work are
correct, although, of course, circum-
s will cause a marked variation. We
that the chapter on Approximate Cost
ldings might be revised with advantage.
ome years since those given would apply,
en with the 20 per cent. added as recom-
d in the fly-leaf would certainly not cover the cost of average buildings at the present time. As we have said above, little can be said in the way of criticism of individual prices, but there has been an obvious attempt to bring the work up to date, a very thankless task under present conditions.

Applied Mechanics. By Ewart S. Andrews, B.Sc. (Cambridge: University Press. Price 4s. 6d. net.)

The subject of Applied Mechanics is a very important one to engineering and architectural students, and yet it is often neglected on account of the difficulties met with during study. These difficulties arise owing to many of the text-books being vague or written in a style which is beyond the average student's comprehension, and to many teachers not having sufficient knowledge to express themselves in a simple and explanatory manner. The author of this volume has realised these facts, and he has presented the elementary principles of mechanics in such clear terms that the reader of average intelligence will not be disheartened and deterred from proceeding with the complete study of the subject. The volume opens with a clear exposition of the representation of forces, and the reader is then taken through the questions of moments and leverage. This is followed by chapters devoted to work, power, and energy and machines and efficiency. Velocity is dealt with, and we then have a very interesting chapter on Newton's Laws of Motion. Stress and strain, riveted joints, forces in framed structures and beams and girders are all fully considered, and the portions devoted to these items will be of great value to the student, as they are clearly written, and no pains have been spared to keep the text as simple as possible, while all the essential points are dealt with. The remaining chapters deal with the centre of gravity, friction, and lubrication, motion in a curved path, mechanisms, and belt, chain, and toothed gearing. Many simple experiments are given in order to make the principles clear, and exercises are set at the end of each chapter, together with a summary of the matter contained in that chapter.

The book is quite one of the best that we have seen on Applied Mechanics, and it should prove admirable for class purposes or individual study, while it can be thoroughly recommended to all our readers.

The Practical Design of Steel-Framed Sheds. By Albert S. Spencer. (London: Constable & Co., Ltd. Price 10s. 6d. net.)

The author of this volume has attempted to standardise shed-members and foundations, because he is convinced that the designing of sheds is left almost entirely to manufacturers of such structures, with the result that inconsistent and inadequate structures are erected.

It is quite true that where competitive designs and estimates are obtained without rigid conditions certain risks are taken by designers in order to keep the price as low as possible and thus secure the work; but it is quite unlikely that any technical book will prevent such methods continuing. The practical design of steel-framed sheds or any other form of construction should not be undertaken by unqualified persons, and if qualified engineers, working for competitive manufacturers, deliberately refrain from providing a proper factor of safety in order to keep down the cost the only remedy will rest with the client, and he is unlikely to understand the work.

The author deals with the resistance of steel-framed sheds to wind forces and various standard types of sheds, with methods of calculation and explanatory notes. Chapters are also devoted to standard stresses and sections for ridged-roof principals, external coverings and gutters, pipes, ventilation, doors, windows and skylights. The text is well-arranged and explanatory, and printed in nice bold type, while the diagrams are good. Several well-drawn plates are attached at the end of the book, and these should be helpful to the reader.

◆

EAST SUTTON ESTATE, KENT.

In the sale of the East Sutton Estate, near Maidstone, which belonged to Sir Robert Filmer, who died of wounds received in France, the ruins of Sutton Castle, near Sutton Valence, originally built, it is believed, *temp.* Edward I., and a stronghold of Aymer de Valence, Earl of Pembroke, were sold for £100.

THE BUILDING TRADE.

INCORPORATED CLERKS OF WORKS' ASSOCIATION.

MR. ERNEST NEWTON, A.R.A., President of the Royal Institute of British Architects, took the chair on Saturday night at the Holborn Restaurant, at the thirty-third annual dinner of this Association, and was supported by Mr. E. T. Hall, F.R.I.B.A., Mr. H. Austen Hall (President of the Architectural Association), Mr. Alfred Gotch, F.R.I.B.A., Lieut.-Colonel A C. Preston (Carpenters' Company), Mr. Walter Lawrence (London Master Builders' Association), Mr. A. Keen, F.R.I.B.A., etc.

Mr. G. W. Ramplin submitted the toast of the " Architects and Surveyors," and, after referring to the falling off in private building owing to the war, pointed out that large sums of money were being spent on the erection of munition works. These, he took it, would be used after the war for industrial purposes, and the consequent extension of the country's trade should lead to the erection of houses and the employment of architects and surveyors.

Mr. Alfred Gotch, in reply, said he was pleased the toast was that of " Architects and Surveyors," because as one who practised his art—or should he say followed his business ?—in the country he still styled himself an architect and surveyor. He imagined the distinguished gentlemen surrounding him who practised in London called themselves architects only. He thought it a great pity that the sub-title of surveyor should be discarded. On looking back on the history of architecture in this country, they found that the two most distinguished names connected with it, Inigo Jones and Christopher Wren, were primarily surveyors, and it was only a modern fashion to call them architects. The proposer had referred to the present state of building, and he was bound to say architects and surveyors were rather in the position of the gladiators of old who, when they were introduced into the arena and saw the devouring lions in front of them, hailed the Roman Emperor in the words, " We who are about to die salute you." By a slight change of words he might, on behalf of the architects and surveyors, say, " We who are about to die thank you for this toast." He hoped the words of the proposer might prove true, but so far as he could see the vista in front of them was dismal. However, they must cast such thoughts away and try to be cheerful in the face of annihilation.

Mr. A. F. Dorey proposed the toast of " The Worshipful Company of Carpenters," and expressed the gratitude of the Association to the Company for their many acts of kindness.

Lieut.-Colonel A. C. Preston acknowledged the toast, and said, while the Company had given up all their entertainments, they were keeping on the technical schools and the popular lectures.

Mr. J. R. Scales, in proposing " The Builders and Visitors," pointed out that the gathering had not only its social side, but also its benevolent side, and he trusted that the visitors would consider the claims of the Benevolent Fund.

Mr. Walter Lawrence, in reply, said the building trade was simply a shadow of its former self. Many private jobs were stopped, and there were rumours that the Government were about to take even more stringent measures in regard to the private work now going on. His own view was that they should have taken the matter in hand sooner if it was needful. At the moment they could take it that they had only one contract in hand, which was to beat the Germans, and he submitted that time was of the essence of the contract. As to the building trade, they must make the best of it as Englishmen. He had no doubt that members of the architectural profession, like the master builders, had offered their services to the Government without fee or reward, but he was sorry to say they had not been received with open arms.

The Chairman, in proposing " The Incorporated Clerks of Works' Association," said it was founded in 1882, and for twenty-five years was self-supporting. During that time the Committee had granted assistance from subscriptions of members to clerks of works who had been unable through sickness to follow their employment. But the funds were only sufficient for temporary relief. The Committee then, with the help of a few friends, formed a benefit and pension fund, to enable them to assist members in temporary distress and to grant a small pension to those who through old age were compelled to retire from active service. It was to the annual dinners and outings that the Association looked for support, by an appeal from the Chairman to the visitors present. There was a membership of 127, consisting of members, hon. members, and Associates. By the kind permission of the Carpenters' Company meetings were held once a month, papers were read, lectures given. Members were elected after careful consideration, and all so elected were men fully qualified to undertake the duties of clerk of works. He would call special attention to the fact that it was to the Chairman's appeal at the annual dinner that the Association looked for support for its benefit fund. The war, in almost entirely stopping building, had naturally hit the clerks of works very severely, and, although there were at the moment many clerks of works who were eminently suited for war work, he believed he was right in saying that, whatever might be the case as regarded individuals, as an Association they had not been made use of. In the eyes of the authorities it would almost seem that organisation was a sure bar to employment. Naturally this fall in employment meant corresponding difficulties for those unemployed. Savings would not last for ever, and there were many who had already exhausted their economies, and there must be many who were within sight of this catastrophe. It was here that the benefit fund came into play, but even benefit funds could only be of service if those who were able to do so subscribed to them. Every little helped, and he hoped none of those to whom he was appealing would be deterred from giving because they felt they could only give very modestly. All of them—architects, contractors, surveyors, quantity surveyors, clerks of works, all in fact connected with the great art of building—were suffering more or less, but they could still do something to help each other. One read sometimes of flocks and herds overwhelmed by a snowdrift drawing close to one another for warmth and so surviving. In the same way he hoped that by holding together they might weather the storm and emerge when it was all over, a little battered it might be, but ready to take their part, each in his own sphere of activity, in carrying out all the work which they hoped might have to be done in the future.

Mr. E. Stevens (President of the Association), in reply, said there were two points he would mention which they considered of importance. Their Secretary had written to the Royal Institute of British Architects, asking them to receive a deputation on the question of salaries, and they had had no reply. He hoped their Chairman would see if a meeting could take place. The second thing was that they were given to understand that they were not under the Employers' Liability Act, and they wanted architects to put a clause in their specifications covering the insurance clause.

Mr. A. Fincham proposed the health of the Chairman in eulogistic terms, and it was received most cordially.

The Chairman said he well remembered in his early days in what respect he held the clerk of works. He was a mysterious being full of traditional building knowledge, knowing the brand marks of timber, and even the natural bed of Caen stone. Naturally ti had somewhat divested him of his mysteri attributes, but his feelings of respect remain as strong to-day as they were forty years a He had made a note of the remarks of Stevens, and he supposed the letter he referr to had gone astray, as it had not come un his notice.

THE YORKSHIRE FEDERATIO OF BUILDING TRADE EMPLOYERS.

THE monthly meeting of the Executi Council was held in the Metropole, We street, Hull, on Tuesday, February 15. R. Finch (President) occupied the chair, a fifty-three delegates were present.

Munitions Act, 1916.

Members were reminded that it was necessa to apply to the Ministry of Munitions for order to be made for all works sought to brought under the provisions of this Ac and it was resolved :—" That members urged in all cases where they are engaged the construction, alteration, or repairs works of construction for naval and milita purposes, and of buildings in which muniti work is or is intended to be carried o and the erection of machinery and pla therein, and the erection of houses for accommodation of persons engaged or about be engaged, to apply to the Ministry of Munitio for an order for the work to be brought und the provisions of the Munitions Act."

Pre-War Contracts and Suspension of Works.

The President reported that this importa matter had been referred to a Special Committ of the National Federation. The Committ were also empowered to deal with the furt question raised by the Yorkshire Federati namely, the compensation to be paid contractors on works suspended by pub authorities or private clients at the request the Government in pursuance of the natio policy of retrenchment. It was resolved: " That the importance of this matter and urgency and necessity of collecting informati on the points raised be impressed on Lo Associations, and members requested furnish all particulars within their knowledge the Federation Secretary at once."

Reserved Occupations.

Attention was drawn to the desirability contractors being secured of a requisite sup of labour to complete works which are hand for Government purposes, and following resolution was agreed to :—" Th the Federation be requested to make urg representations to the Reserved Occupatio Committee to include in the list of reser occupations workmen engaged on works to used for Government purposes, in order t such works be carried out with expedition, contractors and workmen while engaged such work be exempt from military service.

Co-operative Societies and Income Tax

The immunity of co-operative societies fr income tax and excess profits duty was c sidered, and after discussion the follow resolution carried :—" That the attention the Prime Minister and the Chancellor of Exchequer be drawn to the unfair inequitable consideration granted to operative societies whereby such socie are enabled to carry out constructional w under preferential conditions, owing to th immunity from payment of income tax excess profits duties ; and, in order that incidence of taxation should fall equally u all engaged in constructional work, co-operative societies should be required pay income tax for building work carried

ıem, and thereby place them on an equality
building contractors."

Next Meeting.

. H. Connell on behalf of the Selby Asso-
ɔn invited the Federation to hold the next
ing in that town. The invitation was
ɔted, and the meeting fixed for Thursday,
h 16.

NEW GOVERNMENT CONTRACTS.

War Office.

ping and Fittings, Metal.—J. Brotherton,
Imperial Tube Works, Wolverhampton;
t & Sons, Ebro Tube Works, Tipton;
ussell & Co., Ltd., Wednesbury; Scottish
Company, Ltd., 34, Robertson-street,
ɡow; Stewarts & Lloyds, Ltd., 41, Oswald-
t, Glasgow.
ant, Pumping.—Gwynnes, Ltd., Hammer-
h Ironworks, W.
ımps, etc.—Beck & Co., Ltd., 130, Gt.
ɔlk-street, S.E.; Boulton & Paul, Ltd.,
-lane Works, Norwich; J. Evans & Sons,
verhampton; Gwynnes, Ltd., Hammer-
h Ironworks, W.; Lee, Howl, & Co.,
on; W. Matthews & Co., Ltd., Brookside
ks, Moston-lane, Manchester; Merry-
her & Sons, Ltd., Greenwich-road, S.E.;
C. Potter & Co., Lant-street, Borough,
: Thould & Hutchinson, Upton-on-Severn;
Vinn & Co., Birmingham.
oofing, Asphalted.—Graves & Co., Water-

oofing, Rubber.—F. McNeill & Co., Kirkin-
ch, Glasgow, etc.
ope, Wire.—Shropshire Iron Company, Ltd.,
ley, Wellington, Salop.
eel, Constructional.—Braithwaite & Kirk,
vn Bridge Works, West Bromwich;
man, Long, & Co., Ltd., Middlesbrough;
ingham Iron Company, Scunthorpe, Lincs.
vitchgear for Transformers.—British Thom-
Houston Company, Ltd., 83, Cannon-
t, E.C.
orks Services.—Drainage, roads, etc., at
ngdon Camp, W. L. Wallis & Co., Seaside-
, Eastbourne; drainage and water supply
uts in the Minster area, Isle of Sheppey,
& Pollitzer, 271A, King-street, Hammer-
h, W.; electric lighting at R.F.C. Camp,
ford, Mann, Egerton, & Co., 379, Euston-
, N.W.; electric lighting to new hut
ital, Dublin, Ellis & Ward, Ltd., 35,
n Victoria-street, E.C.; electric light
llation at Houghton Regis Camp, Grindle-
& Co., 23, Davies-street, W.; electric
ing at hutted camps, Duddingston, and
horn, Eastfield, and Westfield, Grindlay,
, & Co., Ltd., 47, Waterloo-street, Glasgow;
ervices to the hutted camps at Glencorse,
Penicuik and District Gas Company, Ltd.,
cuik; heating aeroplane shed at Norwich,
yn, Ching, & Co., Ltd., 54, Castle-street,
; heating and hot water supply to sinks
trensall, Jones & Attwood, Ltd., Stour-
ge; water mains and services at hutted
, Thetford, F. R. Hipperson, Northumber-
street, Norwich; work for the establish-
of No. 5 T.F. Artillery School, Luton,
Villmott & Sons, Hitchin, Herts. *Erection*
Coal yards and wood stores at Crowborough,
. Holcombe, Croham-road, Crowborough;
g huts at Canadian Cavalry Depot, Canter-
, W. J. Ballard, Church-road, Ramsgate;
ng-rooms, bath-house, etc., at St. Anne's,
ford, G. Shellabear & Son, Alton House,
ey Plain, Plymouth; drying-room, work-
s, etc., at Shoreham, J. Parsons & Sons,
ch-road, Hove; extension of vehicle sheds
dcot, the Wilfley Company, Ltd., Salisbury
se, London-wall, E.C.; huts at Butterwick,
Arnold & Son, Printing Office-street,
caster; huts at Bawdsey, G. A. Kenney &
Burrell-road, Ipswich; huts at R.F.C.
p, Beverley, T. Obank & Sons, Cyprus
ks, Thackley, Bradford; huts at aerodrome,
lington, S. F. Davidson, 16, Ridley Villas,
castle-on-Tyne; latrines and inflammable
, etc., at R.A.F., South Farnborough,
G. Tarrant, Byfleet, Surrey; machine gun
at Crayford Marshes, Wm. F. Blay, Ltd.,
l-street, Dartford; markers' galleries at rifle
range, Thetford, Wm. Saint, St. Barnabas-road, Cambridge; power houses at Crombie and Rosyth, Wm. Finlayson & Sons, Balfour-street, Leith; railway shed at Milton, G. Sands & Sons, Ltd., Colwick, Nottingham; regimental institute, etc., at Sittingbourne, L. Seager, Sittingbourne; regimental institute at Summerdown Camp, Eastbourne, G. Bainbridge & Son, Terminus-road, Eastbourne; sectional huts at Shoreham, McKellar & Westerman, 136, Church-road, Hove; sergeant's messes, etc., at Crowborough, R. Cook & Sons, Crawley; two sets of petrol engines and turbine pumps at A.O.D., Weedon, Pulsometer Engineering Company, Ltd., Nine Elms Works, Reading; shelters and latrines at rifle range, Dreghorn, J. Scott & Brown, 3, Barclay-place, Edinburgh; soldiers' latrine blocks at Glencorse, T. Topping & Co., 52, Dalry-road, Edinburgh; steel buildings at Milton, G. Sands & Sons, Ltd., Colwick, Nottingham; steel buildings at Milton, the Wilfley Company, Ltd., Salisbury House, London-wall, E.C.; store sheds at Didcot, the Wilfley Company, Ltd., Salisbury House, London-wall, E.C.; technical buildings at R.F.C., Castle Bromwich, Birmingham, Jewson & Sons, St. Clements, Norwich; technical buildings at Fort Grange, Gosport, Humphreys, Ltd., 187, Knightsbridge, S.W.; temporary engine-room, etc., at Dunoon, T. Young & Sons, Wellington-place, Dunoon; vehicle shed at Forthside, Watson & Sons, 53, Caledonian-road, Perth.

H.M. Office of Works.

Building Works.—Admiralty, new rooms, Fred Pitcher, Ltd., 133, Marylebone-road, N.W.; Canada House, Kingsway, alterations, William Taylor & Co. (Hammersmith), Ltd., Lower Mall, Hammersmith, W.; Eastcote Camp, alterations and additions, Henry Martin, Ltd., Thenford - street, Northampton; Teddington, research building, John Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.

Engineering Services.—Heating apparatus, the Thames Bank (Blackfriars) Iron Company, Ltd., Upper Ground-street, S.E.; London Institution, heating, etc., W. G. Cannon & Sons, Ltd., 107, London-road, Southwark, S.E.; Public Offices, Westminster, extension, steam and condense mains, etc., H. J. Cash & Co., Ltd., Caxton House, Westminster, S.W.; Teddington, research building, heating apparatus, E. Deane & Beal, Ltd., 3, Monument-street, E.C.

Miscellaneous.—Addlestone Research Institute, glazed wall tiling, Carter & Co. (London), Ltd., 29, Albert-embankment, S.E.; Public Trustee Office, steel shelving, Estler Bros., South Molton-road, Victoria Docks, E.

Commissioners of Public Works, Ireland.

De Freyne National School, Co. Roscommon, Erection.—Hubert Cassidy, Castlerea.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The plan providing for the closing of Kingsland-place in connection with the extension of Broadford Works has been approved by the T.C.

Basingstoke.—At a recent meeting of the B.C. it was decided to widen the road to provide a third approach to the railway-stations. A recommendation was made to erect sanitary conveniences.

Bedford.—Plans passed by the T.C.:—Temporary factory, for Messrs. Wilson & Berry, Ltd., Tavistock-street, 40, Western-street; extensions to smithy, for Messrs. W. H. Allen, Son, & Co., Ltd., Queen's Engineering Works; greenhouse, for Mr. F. W. Brittain, 19, Kingsley-road; lavatories, for Messrs. W. H. Allen, Son, & Co., Ltd., Queen's Engineering Works; shelter for motor-cars, for Corporation of Bedford, Town Hall; alterations and additions, for Co-operative Society, Ltd., Ampthill-road; temporary building, for Messrs. Wilson & Berry, Ltd., Tavistock-street.

Burnley.—A bequest for the erection of an almshouse at Burnley is contained in the will of Mrs. Pamela Parsons, of 37, Guerdon-terrace, Accrington-road, Burnley.

Burton-on-Trent.—A company has purchased a plot of land adjoining the Midland Railway at Horninglow for a factory for the manufacture of bicycle tyres, and building operations are to commence shortly. Fifty acres have been secured in the same area for the erection of other works by an important company.

Canary Islands.—Tenders will be opened by the Municipality of Las Palmas on March 16 for the construction of a slaughterhouse in that city. The estimated cost of the works is 298,095 pesetas (about £12,000). The installation of the necessary machinery, etc., for the slaughterhouse will be put up to tender later.

Chatham.—Instructions have been given to the Surveyor to prepare plans for suitable lavatory accommodation in the cemetery for the T.C.

Coventry.—The R.D.C. has approved the plan of a proposed messroom at the works of the British Chuck and Piston Ring Company, Ltd.

Cowes.—The U.D.C. has aproved a plan of the proposed reconstruction of a house and shop in Bath-road.

Glasgow.—The T.C. of Port Glasgow has under consideration the proposal by Mr. Henry Lithgow, of Messrs. Russell & Co., shipbuilders, to reconstruct the portion of the works of Messrs. Robert Duncan & Co., recently acquired by Messrs. Russell & Co. The T.C. resolved to accept the offer of Messrs. Russell & Co. on the terms mutually agreed upon.

Goole.—A plan for an addition to a classroom at the United Methodist Free Church, Boothferry-road, for the Trustees, has been approved by the U.D.C.

Hendon.—Plans passed by the D.C.:—For new offices and timber drying chambers, as an extension of factory, N.W., near Colindale-avenue and Edgware-road, the Integral Propeller Company, by Messrs. Forsyth & Maule; for alterations to clubhouse, etc., Willifield-green, the Garden Suburb Builders; for water-closet, lavatory, etc., Station-buildings, Finchley-road, Mr. H. A. Welch; for wooden building, side of Congregational Church, Lawrence-street, Mill Hill, Mr. F. Parvin; workshop and offices, London Aerodrome, the Grahame-White Aviation Company; new sewers, etc., at London Aerodrome, the Grahame-White Aviation Company; temporary building for Aviation School, the Grahame-White Aviation Company.

Hexham.—The following plans have been passed by the R.D.C.:—Plans for two semi-detached villas at Allendale, for Mr. Thompson, Low Fell, Gateshead; and for alterations and additions to cottages at Princes-street, Corbridge, for Mr. J. Davidson, builder.

Hitchin.—The following plans have been approved by the R.D.C.:—Alterations and additions to house at Norton, for Mr. W. Haslam Lucas; extension to Three Horse Shoes public-house, Norton, for the People's Refreshment House Association, Ltd.

Hull.—It is the intention to apply the proceeds of the proposed sale of the Church of St. John in Victoria-square, Hull, to the purchase of lands in or near Hull for the erection of a new church and parish hall.

Kingstown.—At a recent meeting of the U.D.C. plans of the artisans' dwellings on the Brooklawn and Callaghan's-lane sites were ordered to be forwarded to the L.G.B., with applications for the sanction of loans amounting to £24,360.

Langport.—The R.D.C. has approved plans of a new house, for Mr. W. E. Knapp, in Windmill-lane, Huish Episcopi.

London.—The chairman of the South Eastern and Chatham Railway Managing Committee has stated that to make full use of Charing Cross station a stronger bridge is wanted. It has been proposed to throw another bridge over the Thames 57 ft. wide, and this plan was approved. The L.C.C. has given consent to the erection of a building in Hawker-street, Peckham, S.E., for Messrs. Tucker, Webster, & Co. The Council has approved plans in connection with the proposed installation of escalators at the Stockwell Station of the City and South London Railway so far as the work affects the Putney, Wandsworth, and Clapham relief sewer (extension to Vauxhall). Under the provisions of the Metropolis Management (Thames River Prevention of Floods) Amendment Act, 1879, the L.C.C. has approved plans submitted in respect of flood-preventing works at the undermentioned premises:—Battersea Flour Mills, Church-road; Hallett's Wharf, Rotherhithe-street; Battersea Works, Church-road. The L.C.C. has sanctioned the construction or reconstruction, within metropolitan boroughs, of local sewers as follows:—Bermondsey, 110 ft. of 9-in. sewer between Truscott-court and Gainsford-street; Westminster, 50 ft. of 15-in. sewer in the Haymarket, opposite Orange-street; Woolwich, 440 ft. of 9-in. sewer in Lannoy-road, New Eltham; 1,470 ft. of 9-in. sewer in Crookston-road (east and west of Glenesk-road); 1,130 ft. of 9-in. sewer in Dairsie-road (east of Glenesk-road); 1,180 ft. of 21-in. sewer in

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* See also our list of Competitions, Contracts, etc., on page 169.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness.	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	8¾	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10	10	10	8½	7½	7½	7½
Leicester	10¼	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne.	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10½	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10	10½	9½	10	9¼	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted.

Earlshall-road (east of Westmount-road); 30 of 9-in., 300 ft. of 12-in., 300 ft. of 15-in., 30 of 18-in., and 305 ft. of 21-in. sewer in Glen road; 375 ft. of 9-in., 410 ft. of 12-in., and 25 of 15-in. sewer in Deansfield-road (east Glenesk-road); 620 ft. of 9-in. and 205 ft. of 1 sewer in Dumbreck-road (east of Glenesk-ro 945 ft. of 9-in. and 615 ft. of 15-in. sewer Elibank-road (east and west of Glenesk-ro 615 ft. of 9-in. sewer between Crookston Deansfield roads; 430 ft. of 9-in. sewer south Elibank-road; 750 ft. of 9-in. sewer north Westmount-road; and 910 ft. of 9-in. sewer no of Grangehill-road.

Loughton.—The U.D.C. has approved amended plan for an extension of workshops Messrs. Warriner & Son.

Middleton.—At a recent meeting of the Mr. L. Simpson presented plans and speci tions for a new girder bridge on the old and it was resolved to ascertain from the if they would be prepared to assist in the erect of a new bridge.

Neston (Cheshire).—The D.C. has appro plans for house and farm buildings at the Lane Ends, for Mr. Hy. C. Peers.

Perthshire.—It is proposed to establish garden village in Perthshire for the training employment of county soldiers who may partially or permanently disabled.

Ruislip-Northwood.—The U.D.C. has appro the following plans:—House near Nort Junction, for Mr. D. Duncan, submitted by H. C. Lawrence; garage in Murray-road, for G. Kingsley, submitted by Messrs. Swannel Sly.

Selby.—At a recent meeting of the U.D. resolution was adopted that, subject to L.G.B. sanctioning the necessary loans, Council proceed to build 100 houses. It decided that the Surveyor prepare plans for first batch of thirty-four houses, and that L.G.B. be asked to give immediate sanction the purchase of the land.

Sheerness.—Sanction has been given for p for a garage in Wood-street, for Mr. A. H phrey, and for a temporary wooden shed in playground of Holy Trinity Schools, for Co-operative Society.

Southend.—At a recent meeting of the T.C. following plans were approved: Additi "Rookwood," Marguerite-drive, Mr. A. Sanders; alterations and additions, 41, Mar parade, Mr. L. Greenwood; two houses, Elect avenue, Mr. T. J. Dennis; two bungalows, No view-drive, Mr. H. Bridge. The Borough veyor presented a plan showing prelimin proposals for the development and extension certain of the main and subsidiary roads in area of the North-West Town-planning Sche The plan was approved, and the Borough veyor was directed to make inquiries with a to the inclusion of the proposals in the sch for this area. The Borough Surveyor was directed to report upon the question of includ other portions of the borough in a town-plann scheme.

South Wales.—According to the designs of W. D. Caröe, Master of the Plumbers' Compa new churches are about to be erected at Torq and Loughor in South Wales.

Swansea.—At a recent meeting of the Council the Estate Agent reported upon correspondence and interviews between chairman, himself, and Mr. S. R. Crocker, ar tect, acting on behalf of a syndicate who w desirous of renting the two plots of land Worcester-place to the Corporation, with in vening land of the Duke of Beaufort, for purpose of erecting a cinema.

Tilbury.—The L.G.B., with the sanction the Treasury, have authorised the U.D.C. proceed with the immediate provision of houses.

Tring.—At a recent meeting of the U.D the Building Committee submitted and rec mended for approval plans for a cinematogr theatre in Western-road, a soldiers' room Christchurch-road, a garage in Akeman-st for Mr. Rodwell, and a cinematograph theatr Akeman-street.

Weymouth.—Plans passed by the T.C. Plans submitted by Messrs. Theo. Conway, L for alterations to brewery of Messrs. J Groves & Sons, Ltd.; submitted by Mr. Jackson, for alterations to No. 12, Cove-str for Mr. W. C. Talbot; amended plan, s mitted by Mr. S. Jackson, for alterations No. 3, Coburg-place, for the Wilton Esta submitted by Messrs. Crickmay & Sons. proposed alterations to the Gloucester Ho submitted by Mr. John Barrow, for propo alterations to shed at No. 21, Emmadale-road

TRADE NEWS.

Boyle's latest patent "air-pump" ve lators have been adopted for new extension Wigan Infirmary, Wigan.

The Kirkcaldy New Sanatorium is be supplied with Shorland's double-fronted wa air ventilating patent Manchester stoves w descending smoke flues by Messrs. E. Shorland & Brother, Ltd., of Failswor Manchester.

We learn that the urinal in the People's Pa Grimsby, was treated many months ago w Pudloed cement, and the Borough Surve is pleased with the result

PROPERTIES OF LIMES AND PLASTERS.—III.

the purpose of this article to deal with imes which possess hydraulic properties, ntrasted with those prepared from ally pure carbonate of lime or containing ition only magnesia and material which inert in the burning and setting ses.

special character of hydraulic lime s upon somewhat complex chemical both in production and use, which must plained. Most limestones contain, in n to carbonate of lime, silica SiO_2 a Al_2O_3, and often iron oxide Fe_2O_3.

when these ingredients are not evenly inated, or when the temperature on g is unsuitable, the resulting product is a poor or lean lime in which the ents act solely as inert diluting matter; nder favourable conditions part of the nd alumina combine with part of the n burning to form silicate and aluminate e compounds, which break up on the n of water and recrystallise, and thus conferring considerable strength on the esulting solid (the mortar). It is these then, which give the hydraulic properties e limes. Strictly speaking, it is perhaps wholly the silica upon which hydrau- turns, the alumina and iron being very ary, but at the same time the former v is important, inasmuch as when ed with lime it breaks up more readily addition of water than does the silica und, which is thus itself subjected to ion and brought into a condition of ility for the action of water and process ing. The composition of this silicate is not agreed upon, for, though most regard it as (3 CaO) SiO_2, there appears good evidence in favour of accepting mula (2 CaO) SiO_2. This matter, of has considerable significance in g the proportion of lime to silica in hydraulic limestones in reference to .

lime silicate is the essential ingredient cements, both natural and artificial, set by the breaking up and recrystallisa- this body with water in exactly the anner as hydraulic limes, the difference n the two being that cements are ntially composed of this compound, must be very finely ground to enable o act upon it, whereas the limes contain tion a large quantity of lime in excess, slakes on the addition of water, and by lence of this action breaks up the silicate us removes the necessity for the costly g process. This function discharged, ee lime merely dilutes the effective ing power of the material, hence the ydraulic limes are much inferior to s. A careful study of the above ions is necessary to give a clear con- of the relations between fat limes, ic limes, and cements. If we could a cement the lumps of which were hly incorporated with free lime particles mixture would be a hydraulic lime. ss of material then is a true intermediate etween common lime and cement.

re knows no sudden breaks in her of materials, and hydraulic limes are ranging from those but little removed t lime to those containing when burnt imum amount of free lime necessary k up the silicate and aluminates. y, however, this class may be divided o groups—the feebly hydraulic and ly hydraulic limes. What is known as lime" is a feebly hydraulic lime, and king and Merstham limes are examples class, while the Holleywell and Lyme arieties (the latter perhaps the most c in this country) are instances of the ly hydraulic class.

ydraulic limes are burnt in stationary milar in general principles of construc- those used for common lime burning; temperature attained must be much reaching 1,000 deg. C. to even g. C. (above the melting-point of cast- the proper combination between the e and the silica after expulsion of the carbonic acid gas is to be obtained. The best limestones for these limes contain 70–80 per cent. of carbonate of lime, 13–17 per cent. of silica, and 1–6 per cent. of alumina and iron oxide.

When hydraulic limes are slaked with sufficient water to disintegrate the lumps, certain nodules remain which contain so little free lime that they refuse to break up by this treatment. They are in effect lumps of cement, being chiefly composed of silicate of lime and alumina, though always containing some quantity of inert material. These lumps are known as grappiers, and are removed and ground in the same manner as cements. They form a valuable cement, less strong than Portland but superior to hydraulic lime, and are particularly useful for setting stonework, which they do not stain. Care, however, is required in their selection, as if a hydraulic lime is insufficiently burnt these lumps, instead of consisting of lime silicate, will be mostly composed of worthless inert matter, in which the original stone will predominate.

Le Chatelier gives the composition to be looked for in a grappier cement as lime CaO, 63 per cent.; silica (SiO_2), 26·5 per cent; iron oxide (Fe_2O_3), 1·5 per cent.; magnesia (MgO), 1 per cent.; carbon dioxide (CO_2), 5 per cent., from which typical analysis the character of any sample proposed for use may be in some measure judged.

As regards strength no recognised standards exist for hydraulic lime similar to those demanded for Portland cement. Good hydraulic limes have a specific gravity about 2·9 and grappiers about 2·7 as against 3·1 for Portland cement, and in tensile strength range from 100 to 400 or 500 lb. per square inch.

In the case of feebly hydraulic limes a very considerable increase in strength can be conferred by the process known as "selenitising," which consists of the addition of about 5 per cent. of sulphate of lime, which may be effected by the action of sulphuric acid on a portion of the lime, or more usually by the addition of plaster of paris to the ground lime, with thorough subsequent mixing. These limes are largely used for plaster, but that they deserve further consideration for mortar has been proved by experiments upon their strength by Kirkcaldy, in which the strength of given mortars of feebly hydraulic lime and sand showing only 24 lb. in tension, 122 lb. in compression, and 8 lb. in tension as a joint between bricks per square inch was increased to 64 lb., 285 lb., and 17 lb. respectively when selenitised, notwithstanding that the proportion of sand was somewhat increased. These data are a summary of a number of experiments on various mixtures. The better classes of hydraulic limes do not repay the cost of selenitising.

THE INSTITUTE OF BRITISH DECORATORS.

A MEETING of the Incorporated Institute of British Decorators was held at Painters' Hall, Little Trinity-lane, E.C., on Tuesday, the 8th inst., when a paper was read on "The Legitimate Use of Imitations" by Mr. Godfrey Giles, F.I.B.D. In the course of his remarks the author said:—

"Decoration, I believe, means essentially putting things in order, arranging things in accordance with the requirements of those who use them, and in agreement with the physical qualities of the things dealt with. It means putting things as they should be. After some disarrangements or decay or damage, or even ordinary wear and tear in a house, a certain amount of restoration or redecoration is necessary. So decoration covers the whole field of the completion and maintenance of a building, and, of course, the greatest part of the work of a decorator is the repair or renewal of the internal surfaces of buildings. These surfaces are almost always formed of plaster, and it comparatively rarely happens that any change of form is required. The decorator's work must consist of efforts to apply texture and colour to these surfaces.

I said just now "comparatively rarely," because in the majority of cases the plaster is left as it is, and merely painted and papered; but in some cases, of course, mouldings, plain or enriched, are applied to the walls, consisting of wood or fibrous plaster to form panels in the Adams, Louis XVI., Georgian, or other styles, and dado rails applied to form dados, etc.

Where is the decorator to go for inspiration if he is not to imitate something? If he paints anything white he unconsciously perhaps produces the appearance of white marble or ivory; if he uses large surfaces of single colours he may give something of the effect of hanging cloth or tapestry.

When a decorator uses wallpapers, either with or without patterns, he very often either unconsciously or intentionally imitates something. This remark—that is to say, as regards unconsciously—applies more particularly to persons who practise as decorators, but who really are not, in the true and professional sense of the word, for a decorator properly qualified and experienced knows perfectly well what effects he will produce or how to produce an effect he requires.

This knowledge is very essential when handling wallpapers, and I consider the "imitation" the decorator effects perfectly legitimate when carried out with knowledge and skill, so that the imitation is really a good one, and produces as nearly as possible the artistic effect of the real article.

Take, for instance, a leather paper. If a person cannot afford to have a hall, library, or billiard-room hung with real leather a good imitation carried out well will give a pleasing and artistic effect as long as the remainder of the work in the room is treated in keeping with the particular kind of wall treatment in use.

I show a so-called leather paper which I do not consider it legitimate to use. The imitation is too bad. When hung it does not suggest the effect or surface of leather, and in practice I have always refused to consent to the use of such a paper in rooms I have been entrusted with. Imagine this paper in a room with white paint; the result is neither pleasing nor pretty, certainly not artistic, and therefore in my opinion not legitimate.

Some papers imitate canvas or jute, some tapestries; some plain cloth, such as flock paper; some represent cretonne.

My remarks in regard to the leather imitation apply exactly to these imitations of canvas, tapestries, cloths, cretonnes, etc.

If the imitation is good and well carried out by the decorator, the imitation will surely give a good result; if not well carried out it is not legitimate and becomes meaningless.

If one were hanging a real cloth, tapestry, or silk, or in fact any fabric, it would be tacked to the wall and finished off with a border, or braid, or gimp. Therefore the papered wall should be treated in exactly the same way, using a paper border representing a braid or gimp to hide the imaginary tacks. If not, paper the walls in a manner so as not to imitate any of these things.

Some wallpapers imitate tiles, marbles, woods, or stone. I think the majority of tile papers are bad imitations, and therefore not legitimate—a varnished paper not imitating anything is better.

We may and must use imitation in decorating London houses; but there is surely room for wisdom in selection of the subjects or materials imitated. Let us try to put as much meaning as possible into our work, and have reasons for what we do as far as possible. If velvets or brocades are copied in wallpapers, let them be used as the real materials would be used. If marble papers are used, let them be put where real marble would not be out of place. The imitation should always be applied in the way or for the purpose the real article would have been used.

To give a few other instances of imitation which are legitimate, and illustrate the numerous methods decorators adopt to obtain effects or results, take walls plated with marble—they are only marble on the surface: the marble may be, or is, the real thing, but has the appearance of solid marble construction.

Walls covered with wood panelling are not walls formed of panelling, such as they appear to be, although the panelling is, of course, not in itself an imitation.

If gold leaf is used in decoration, particularly when used in a bold broad manner, such as gilding in solid the capitals, mouldings, or bases of columns, there is the effect of solid gold; it is an imitation and not the real thing.

We cannot escape imitation in our work. An attempt to do so may be made when a new house is being built, but think what it would mean!

If walls are built of brick, then the bricks must appear; they must not be covered with plaster or any kind of paint or polish, unless one is used which has only the effect of adding durability to an already sufficiently durable surface, that is more easily kept clean than its natural surface. I have seen a house where the brickwork has been left exposed, not plastered or treated in any way, and good decorative effect has been obtained by the use of brick mouldings and the bricks themselves being laid at different angles, but think of the cost of such work! It has to be most beautifully executed and most carefully finished. I know a church, the interior simply being left in red brickwork; there the work was perfectly plain, merely pointed, and to my mind not pleasing, because of its unfinished appearance.

Any alteration of colour that ensues must be accepted without modification or reconsideration if we are to avoid imitation; for, if we modify the colour intentionally, we shall certainly be likely to match some more beautiful material, and so suggest vast quantities of emeralds, amber, rubies, and sapphires that do not exist. We cannot avoid imitation, and need not try to.

The foolish condemnation of marbling and graining that novices and amateurs so frequently have expressed is inexpert and insincere. It generally results from want of knowledge, through not having seen such work well done."

LAW REPORTS.

CHANCERY DIVISION.

(Before Mr. Justice NEVILLE.)

Dispute as to the Footings of a Wall: Alleged Contempt of Court by Solicitor.

Webster *v.* Bakewell Urban District Council.

IN this case, heard on the 11th inst., the plaintiff moved the Court to commit a Mr. Taylor, a solicitor, for alleged contempt of Court for sending letters to him (plaintiff) since the commencement of the action, containing threats calculated to deter the plaintiff from prosecuting the action, and containing matter with a view to interfere with the exercise by the plaintiff of his legal rights, and so prevent the due administration of justice between the parties to the action.

The short facts of the case were these:—

The plaintiff brought the action for a declaration that the defendant Council were not entitled to cut away or remove the roadside bank and footings of the wall of a cottage between Bakewell and Birchover within the defendant's district, and of which cottage and garden the plaintiff was a yearly tenant at a rent of £4 10s. The writ in the action came to the knowledge of the tenant for life of the Stanton Estates (of which the cottage and garden formed part) about January 10, and thereupon her solicitor, Mr. Taylor, by her instructions, wrote to the plaintiff requesting him to discontinue the action. Plaintiff handed that letter to his solicitors, but did not discontinue the action. On January 17 Mr. Taylor wrote to plaintiff to the effect that the tenant for life was determined that the action should not go forward, and that she was anxious to stop it with as little inconvenience to anybody as possible, and stating that his client would have no hesitation in turning the plaintiff out of the cottage so as to place him in such a position that he would have no *locus standi* in the matter if her wishes were not carried out. Mr. Taylor, however, said he hoped that Mr. Webster would not drive his client to take that course.

Mr. C. E. Jenkins, K.C., and Mr. Whitmore Richards appeared in support of the motion; and Mr. Ward Coldridge, K.C., and Mr. J. M. Stom for Mr. Taylor.

At the conclusion of the arguments in support of the motion, and without calling upon counsel for Mr. Taylor, Mr. Justice Neville held that the letter in question did not constitute a contempt of Court. The object of determining the plaintiff's tenancy was to prevent him from continuing the action to the detriment of the interests of the tenant for life, and there was nothing to prevent the lady protecting her rights in that way. He accordingly dismissed the motion, with costs.

Mignott *v.* Thomlinson: Landlord Sued for Negligence.

THIS action, which was tried by Mr. Justice Coleridge with a special jury, was a claim by Mrs. Mignott for damages for injuries caused by falling upon the forecourt of premises in High-road, Leytonstone, owned by the defendant but occupied by his tenant.

Mr. P. Hastings appeared for the plaintiff and Mr. Stuart Bevan and Mr. Harry Geen for the defendant.

The plaintiff stated that on December 9, 1912, as she was walking along the space in front of the shops owned by the defendant at about eleven o'clock on a stormy night, she fell through catching her foot in a hole in the York-stone paving and sustained injuries which required attention at the hospital. She said that the forecourt was about 8 ft. wide upon the same level, and unfenced from the public footpath, and that a hole, which she estimated to be about 18 in. long, 9 in. wide, and 10 in. deep, was left unprotected in the pavement of the forecourt about 2 ft. from the shop-front.

At the close of the plaintiff's case it was submitted for the defendant that no evidence had been given that the defendant had had notice of any want of repair; that he was not responsible, but the occupier, if any unprotected "trap" had been left upon the premises; and that as landlord he was not liable for any defect which was not there when he let the premises to his tenant.

His Lordship reserved the point of law, but for the purposes of sending the case to the jury held that it might have been of advantage to the landlord in letting his premises that the public should have access to the shop over what was originally a garden but now an open forecourt, and that if any negligence was proved against the landlord he would be liable.

The defendant said that he lived at Four Marks, Hampshire, and visited the property occasionally. He had had no notice of any defects in the forecourt, but on receiving an intimation of an accident to Mrs. Mignott he visited the place and found a slight depression in the pavement caused by a cracked paving flag. He, however, thought that no accident could have arisen from that, and as Mrs. Mignott's solicitors wrote claiming compensation for her broken arm, he ignored the whole matter, as he was convinced no such accident had taken place.

Mrs. Crease, who said that she had been tenant of the premises for thirty years, knew of no such hole in the forecourt as the plaintiff had described, but there was a slight depression about the size of a tea saucer close up to the shop-front which a few months ago she herself filled in with a halfpenny worth of cement which she bought in order to prevent children playing with the water which accumulated there.

His Lordship, in summing up, said it was strange that such a hole as the plaintiff had described had not been seen by anyone else, and more strange still, there having been great delay in bringing the action, that in the meanwhile no one else had fallen because of it: the plaintiff had probably exaggerated the size of the hole, as she had done in the case of her injuries, which were first described as a broken arm, but which were afterwards reduced to a severe sprain.

The jury returned a verdict for the defendant, and judgment was entered accordingly.

RAILWAY AND CANAL COMMISSIONERS' COURT.

(Before Mr. Justice LUSH, Mr. GATHORNE HARDY, and Sir J. WOODHOUSE.)

Postmaster-General *v.* Hutchings: Telephones on Building Estate.

THIS case, which raised the question of the rights of the Postmaster-General in regard to the laying of telephone wires and the erection of poles upon a building estate, was heard on Monday, February 7. The respondent was Mr. A. B. Hutchings, the owner of the Sutton Estate at Seaford, in Sussex, which he had laid out for building purposes, and which is intersected by roads, some of which are not yet
built upon, and he sought to uphold a decis
of the local County Court Judge that
Postmaster-General should pay him a rental
£5 a year for the privilege of placing teleph
poles and wires upon certain parts of the ro
a decision to which the Postmaster-Gen
objected.

Mr. H. Murphy, appearing for the P
master-General, said that the matter ca
before the Court by way of a reference un
sect. 4 of the Telegraphs Act of 1878
reference arising out of a difference betw
the Postmaster-General and Mr. Hutchi
relative to the laying of telephone wires u
the Sutton Estate, which was laid out for bu
ing purposes. The estate was partly develo
and was traversed by a number of roads wh
had not yet been adopted by the lo
authorities, although all of them were used
the public. On the estate there were a num
of poles and wires which were originally
there by the National Telephone Company,
paid for them a rental of three guineas a y
When the telephones were taken over by
Post Office the rental was continued in resp
of those wires and poles which were on priv
property, but they objected to paying for th
which were on the public roads. The P
master-General sought to place certain und
ground lines along certain roads, in all ab
¾ mile, and to place three poles in differ
positions for the purpose of radiating the w
to different houses on the estate. For th
three posts Mr. Hutchings claimed a rental
£5 a year; but the Postmaster-General objec
on the ground that they were on public ro

Mr. Boyd Archibald Miller, Surveyor to
Seaford Urban District Council, gave evide
to the effect that the roads were used as pu
roads.

Mr. Hutchings, who conducted his case
person, disputed this, his argument being
the roads were made and maintained by h
He admitted, however, in reply to questi
put by the Judge, that the roads were used
the public for vehicular as well as
pedestrian traffic.

The Court held that the roads were clea
public roads.

Mr. Murphy said that the Postmaster-Gen
was willing to continue to pay a rental of th
guineas a year for poles and wires which
on private property, but not for those on
roads. The Postmaster-General sought to p
certain underground lines along some of
roads, the effect of which would be to red
the number of overhead wires: but
respondent objected to this. In answer t
complaint as to the size and unsightlines
the poles, he said that the Postmaster-Gen
would agree to put up ornamental poles.

Mr. Justice Lush, in giving judgment,
that the roads being public roads, not ta
over by the local authorities, Mr. Hutch
was still the owner of the soil, and therefo
person within the meaning of the Telegra
Act who was entitled to withhold his con
to the placing of poles on the roads. The
master-General, desiring to erect poles
place wires under the streets, made applica
to Mr. Hutchings for his consent, which
would not give. The matter went before
local County Court Judge, who decided
the consent ought to be given, but that
Hutchings ought to be paid a rental of £
year. The Postmaster-General objected
the payment, and brought the matter to
Court. It was clear that in dealing with
application the Court must regard Mr. H
ings, not in his capacity of owner of the ad
ing land, but as the owner of the soil of
road dedicated to the public. If Mr. Hutch
should suffer any damage as the owner of
land, the Act provided in clear terms for
compensation. It was a very unusual thing
a County Court Judge to say that a r
should be paid to the owner of a street
appeared to the Court that it was inconsi
that he should be given a rental for that w
did not affect his proprietary interest. T
was no ground for saying that the Postma
General should pay a rental to the own
the soil of a public road. If Mr. Hutch
could show that, in his capacity of owner o
soil of the road, he would be put to any exp
or damage, it would be right to safeguard
The Postmaster-General, however, would
good any damage, so that respondent w
suffer no pecuniary loss by the erection o
poles. Every possible provision would be
by the Postmaster-General to safeguard
Hutchings against having his roads mad
sightly. The Court had therefore come t
conclusion that the condition imposed by
County Court Judge ought never to have
imposed, and that the Postmaster-Ge
ought to be relieved from it, and consent
to the application.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi., viii.; Public Appointments, —; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

he date given at the commencement of each ragraph is the latest date when the tender, or names of those willing to submit tenders, y be sent in.

EBRUARY 26.—**Lambslack (Auchterless).**—USE.—For the mason, carpenter, slater, ster, and plumber works of reconstruction of elling-house, Lambslack, Auchterless. Plans, ., with the tenant, and with Mr. W. L. ncan, architect, Turriff.

EBRUARY 28.—**Beverley.**—HOUSE AND COT-ES.—For the erection of new foreman's house l two cottages at High Eske Farm, near verley. Plans, etc., of Mr. R. H. Whiteing, hitect, No. 3, Ladygate, Beverley.

EBRUARY 29.—**Dublin.**—REPAIRS.—The rkets Committee of the Corporation of Dublin ite tenders for carrying out repairs to the fs of the fruit and vegetable market, Mary's-e. Plans, etc., by the City Architect. Forms tender, etc., at the Office of the City asurer, Municipal Buildings, Cork-hill, blin Deposit, £2.

EBRUARY 29.—**Harrogate.**—PAINTING.—For the erior painting work required to the Kursaal Spa Rooms, also the Magnesia Pump Room, the Corporation. Specifications, etc., of Mr. E. Rivers, A.M.Inst.C.E., Borough Engineer, nicipal Offices, Harrogate.

EBRUARY 29.—**Leeds.**—PLUMBING.—For substi-ing with iron pipes the present lead hot-er pipes in blocks 1, 2, and 4 of the Work-se, Beckett-street, Leeds, for the Guardians. rms of specification and tender of Mr. James Ford, Clerk to the Guardians, Poor Law ces, South Parade, Leeds.

EBRUARY 29.—**Nottingham.**—REPAIRS.—For ior repairs at the children's homes and Poor v Offices, in the following trades, viz., joiner, klayer, plumber, for the Guardians. Tender ns of Mr. J. Allan Battersby, Clerk to the rd, Poor Law Offices, Shakespeare-street, tingham.

ARCH 1.—**Dartford.**—JETTY.—Construction of mber jetty, about 120 ft. long, in the River mes at Long Reach, Dartford, for the West nt Main Sewerage Board. Drawings may seen by appointment at the Board's offices, at their Disposal Works, Long Reach, Dart-l, and a copy of the specification from Mr. hur B. Coomber, Secretary, offices of the rd, Park House, Bromley, Kent. Deposit, 3s.

ARCH 3.—**Pontypandy.**—HOUSES.—For the tion of forty-three houses at Pontypandy, rphilly, for the Pontypandy Building Com-y. Plans, etc., at 72, Bute-street, Cardiff. Wm Dowdeswell, M.S.A., architect.

ARCH 4.—**Penzance.**—PAINTING.—For paint- at the baths. Specification at the Borough veyor's Office, Public Buildings, Penzance. F. Latham, Borough Surveyor.

ARCH 4.—**Ynysybwl.**—ALTERATIONS, ETC.— alterations and additions to shop premises Treforest for the Ynysybwl Co-operative iety, Ltd., Ynysybwl. Messrs. Arthur Ll. mas & Gomer S. Morgan, architects and veyors, 23, Gelliwastad-road, Pontypridd.

ARCH 13.—**Cavan.**—REBUILDING.—For the tion and completion of new premises for the *ylo Celt* Printing Works, Cavan. Plans and cifications by Mr. P. J. Brady, architect, lyhaise.

MARCH 16.—**Brighton and Hove.**—WORKS REPAIRS.—The Commissioners of H.M. rks and Public Buildings invite tenders for inary works and repairs to buildings in ghton and Hove District for one year from il 1 next.

O DATE.—**Cardiff.**—EXTENSIONS.—For the tion of extensions to Merthyr House, Cardiff ks. Names to Mr. Henry Bugden, .I.B.A., 95, St. Mary-street, Cardiff, with osit cheque of £2 2s.

FURNITURE, MATERIALS, etc.

FEBRUARY 26.—**Newton-in-Makerfield.**—MATERIALS.—Supply to the U.D.C. of builders' materials for one year. Printed forms of tender from the Stores Clerk, Gasworks, Earlestown.

FEBRUARY 28.—**Harrogate.**—MATERIALS.—Supply to the Corporation of builders' materials. Forms of tender of Mr. C. E. Rivers, A.M.Inst.C.E., Borough Engineer and Surveyor, Municipal Offices, Harrogate.

FEBRUARY 29.—**Belfast.**—PORTLAND CEMENT.—Supply to the B.C. of Portland cement, etc., for twelve months. Forms of tender of the City Surveyor, City Hall, Belfast. Deposit, 5s.

FEBRUARY 29.—**Bolsover.**—MATERIALS.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Forms of tender of Mr. J. F. Wardle, Engineer and Surveyor, Council Offices, Bolsover, near Chesterfield.

FEBRUARY 29.—**Newport (Mon.).**—MATERIALS.—Supply to the Guardians of Newport (Mon.) Union of builders' materials. Forms of tender of Mr. A. H. Rees, Clerk to the Guardians, Union Offices, Queen's-hill, Newport, Mon.

* MARCH 1.—**Hove.**—MATERIALS, ETC.—The Hove B.C. invites tenders for supply of materials and execution of certain work during a period of one year.

MARCH 1.—**Morley.**—MATERIALS.—Supply to the B.C. of builders' materials for the year ending March, 1917. Tender forms of Mr. Turner, B.Sc., A.M.Inst.C.E., Engineer, Town Hall, Morley.

MARCH 1.—**Prestwich.**—MATERIALS.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Forms of tender, etc., of the Deputy Surveyor, Council Offices, Prestwich.

MARCH 1.—**Rathdown.**—MATERIALS, ETC.—Supply to the B.G. of building materials, etc. Forms of tender of Mr. Patrick Cunniam, Clerk of the Union, Clerk's Office, Loughlinstown.

MARCH 2.—**Bolton.**—MATERIALS.—Supply to the Electricity Committee of the Corporation of builders' materials for the year ending March 31, 1917. Specifications, etc., of Mr. W. J. H. Wood, Borough Electrical Engineer, Back o' th' Bank, Bolton.

MARCH 2.—**London.**—MATERIALS.—Supply to the Guardians of West Ham Union of builders' materials. Forms of tender, etc., of Mr. Thomas Smith, Clerk, Board Room, Union-road, Leytonstone, N.E.

MARCH 3.—**Colchester.**—STONE LIME, ETC.—Supply to the Roads and Drainage Committee of the U.D.C. of materials for twelve months. Specifications, etc., of Mr. Harold Collins, A.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Colchester.

MARCH 4.—**Buxton.**—MATERIALS.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Forms of tender, etc., of Mr. F. Langley, Engineer and Surveyor, Town Hall, Buxton.

MARCH 4.—**Cheadle.**—MATERIALS.—Supply to the U.D.C. of Cheadle and Gatley of builders' materials from April 1, 1916, to March 31, 1917. Specifications, etc., of Mr. F. R. Gibbins, A.M.Inst.C.E., Surveyor to the Council, Council Offices, Cheadle, Cheshire.

MARCH 6.—**Derby.**—MATERIALS.—Supply to the B.C. of builders' materials, etc., for twelve months. Forms of tender, etc., of Mr. John Ward, Borough Surveyor, Borough Surveyor's Office, Babington-lane, Derby.

MARCH 6.—**Fife.**—FURNISHING.—For the furnishing of the new buildings at the District Board's Asylum at Retreat, near Cupar Fife. General specifications, etc., of Mr. Osborne, Clerk to the District Board of Control, Cupar Fife.

MARCH 6.—**Great Yarmouth.**—WHITE LEAD, ETC.—Supply to the B.G. of white lead, turps, oil, and paint. Forms of tender of Mr. Frank Burton, Clerk to the Guardians, 11, Queen-street, Yarmouth.

MARCH 7.—**Esher.**—MATERIALS.—Supply to the U.D.C. of Esher and the Dittons during the year ending March 31, 1917, of builders' materials. Forms of tender of the Surveyor to the Council, Council Offices, Portsmouth-road, Thames Ditton.

MARCH 7.—**London.**—MATERIALS.—Supply to the Metropolitan Water Board of builders' materials, etc., for three, six, nine, or twelve months as from April 1, 1916. Tender forms from the Chief Engineer, Savoy-court, Strand, W.C.

MARCH 7.—**Manchester.**—MATERIALS.—Supply to the Great Central Railway Company during the six months ending October 31, 1916, or during the twelve months ending April 30, 1917, of builders' materials. Specification, etc., from Mr. Walter Williams, Stores Superintendent, Great Central Railway, Gorton, Manchester.

MARCH 8.—**Aberdare.**—MATERIALS.—Supply to the Directors of the Powell Duffryn Steam Coal Company, Ltd., of builders' materials. Forms of tender of the Stores Manager, Aberaman Offices, near Aberdare.

MARCH 8.—**London.**—MATERIALS.—Supply to the Guardians of Edmonton Union of building materials. Forms of tender, etc., of Mr. F. Shelton, Clerk to the Guardians, Lower Tottenham.

MARCH 9.—**Colchester.**—MATERIALS.—Supply to the Severalls Asylum, Colchester, Committee of Visitors of builders' materials for three months from April 1, 1916. Forms of tender of the Clerk of the Asylum, Severalls, Colchester.

MARCH 9.—**Dover.**—MATERIALS.—Supply to the Dover Harbour Board of builders' materials for three or six or twelve months from March 31, comprising steam, water, and gas tubing and fittings, etc., files or rasps, asbestos packing, etc., lubricating oil, electrical sundries, electric cables, paints, etc., paint oils, spirits, tar, etc., oilman's stores, Portland cement, wire rope. Schedules and conditions of contract of Mr. Martyn Mowll, Register of Dover Harbour Board, Castle-street, Dover.

MARCH 9.—**Powick.**—PAINTS AND OILS.—Supply to the Committee of Visitors of Worcester County and City Asylum, Powick, of paints and oils. Forms of tender, etc., from the Storekeeper.

MARCH 11.—**Aberdare.**—MATERIALS.—Supply to the U.D.C. of builders' materials. Tender forms, etc., of Mr. A. J. Abraham, M.Inst.E.E., General Manager, Electricity and Tramways Department, Aberdare, Glam.

MARCH 11.—**Gainsborough.**—MATERIALS.—Supply to the U.D.C. of builders' materials during the year ending March 31, 1917. Specification, etc., of Mr. Sam W. Parker, Engineer and Surveyor, Council Offices, Gainsborough.

MARCH 11.—**Halifax.**—MATERIALS.—Supply to the Highways Committee of builders' materials during the twelve months ending March 31, 1917. Forms of tender, etc., of Mr. James Lord, M.Inst.C.E., Borough Engineer, Halifax.

MARCH 11.—**St. Helens.**—MATERIALS.—Supply to the Corporation of builders' materials for a period of twelve months. Conditions of contract, etc., of Mr. Arthur W. Bradley, M.Inst.C.E., Borough Engineer, Town Hall.

MARCH 14.—**Mountain Ash.**—MATERIALS.—Supply to the U.D.C. of builders' materials. Forms of tender of Mr. W. G. Thomas, Surveyor, Town Hall, Mountain Ash.

MARCH 18.—**Heywood.**—MATERIALS.—Supply to the Corporation of builders' materials for twelve months. Specifications, etc., of Mr. J. B. Nuttall, Borough Surveyor.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 28.—**Coventry.**—CAST-IRON PIPES, ETC.—Supply to the Waterworks and Fire Brigade Committee of the Corporation of cast-iron pipes, lead pipes, solder, hydrant and valve boxes, etc., for the year ending March 31, 1917. Forms of tender, etc., of Mr. J. E. Swindlehurst, Water Engineer, St. Mary's Hall.

MARCH 20.—**Faversham.**—OIL ENGINE, ETC.—Supply to the R.D.C., of a 25 b.h.p oil engine and two sets of pumps, etc., for waterworks at Boughton, near Faversham, Kent. Specification, etc., from the Council's Consulting Engineer, Mr. H. Howard Humphreys, 28, Victoria-street, Westminster.

[Those with an asterisk (*) are advertised in this issue.]

ROAD, SANITARY, AND WATER WORKS.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

February 28.—**Durham.**—Materials.—Supply to the C.C. of road materials. Mr. John T. Pegge, Town Hall, Durham.

February 28.—**East Retford.**—Granite, etc.—Supply to the R.D.C. of granite, slag, tarmacadam, and refined tar for the year ending March 31, 1917. Forms of tender of Mr. Thomas Henry, Surveyor, Market-square, Retford.

February 28. — **Penarth.** — Limestone, etc.—Supply to the U.D.C. of mountain limestone, road metalling, and gravel, and basalt or granite gravel, up to March 31, 1917. Forms of tender, etc., of Mr. Edgar I. Evans, A.M.Inst.C.E., Surveyor, District Council Offices.

February 28.—**Sleaford.**—Granite.—Supply to the U.D.C. of about 1000 tons of broken granite. Forms of tender of Mr. J. W. Bell, Clerk, 27, Carre-street, Sleaford.

February 28. — **Tenterden.** — Materials. — Supply to the T.C. of road materials. Forms of tender of Mr. W. L. C. Turner, Borough Surveyor, Town Hall, Tenterden, Kent.

February 29. — **Bolsover.** — Supply to the U.D.C., for the year ending March 31, 1917, of broken granite, slag, limestone, basalt, tarred limestone, tarred slag, kerbs and setts, refined tar, pitch, sand, sanitary pipes. Forms of tender, etc., of Mr. J. F. Wardle, Engineer and Surveyor, Council Offices, Bolsover, near Chesterfield.

February 29.—**Boston.**—Materials.—Supply to the R.D.C. of road materials. Forms of tender of Mr. H. Snaith, Clerk, 10, New-street, Boston.

February 29. — **Portland.** — Broken Granite, etc.—Supply to the U.D.C. of about 3,300 tons of 2-in. and 1½-in. broken granite or basalt for the year ending March 31, 1917. Specification, etc., of Mr. G. A. Waite, Engineer and Surveyor, Council Offices, New-road, Portland.

February 29.—**Sheerness.**—Granite.—Supply to the U.D.C. of granite and granite chippings. Tender forms of Mr. Vincent H. Stallon, Clerk of the Council, Council Offices, Sheerness.

February 29. — **West Hartiepool.** — Construction.—For the construction of Newlands-avenue, Ashley-gardens, and Back Percy-street and Bellerby-terrace (portions of), for the Corporation. Plans, etc., of Mr. Nelson F. Dennis, M.Inst.C.E., Borough Engineer and Surveyor, Borough Engineer's Department.

March 1.—**Burnley.**—Granite, etc.—Supply to the R.D.C. of the following materials for twelve months ending March 31, 1917:—Broken granite and limestone macadam, shovels, spades, and navvy barrows, brushes, earthenware pipes, flags, kerbs, and channels, grit setts, cast-iron gulley grates and manhole covers. Form of tender, etc., of Mr. Harold Pritchard, M.Inst.M. and Cy.E., Surveyor to the Council, 18, Nicholas-street, Burnley.

March 1.—**East Dereham.**—Granite.—Supply to the U.D.C. of approximately 800 tons of broken granite and granite chippings. Forms of tender of Mr. F. L. Burch, Engineer and Surveyor, Council Offices, Dereham.

March 2.—**Belper.**—Lavatory, etc.—For the erection of lavatory and water-closet at the Belper Isolation Hospital. Plans, etc., can be seen at the hospital.

March 3. — **Colchester.** — Materials.—Supply to the U.D.C. of road materials. Forms of tender of Mr. Harold Collins, Assoc.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall.

March 3.—**Kettering.**—Granite.—Supply to the R.D.C. of granite, slag, tarmacadam, etc., for the year ending March 31, 1917. Forms of tender, etc., of Mr. Eustace R. Lane, Clerk, Market-place, Kettering.

March 3.—**Pontypandy.**—Roads and Sewers.—For the construction of roads and sewers at Pontypandy, Caerphilly, for the Pontypandy Buildings Company. Plans, etc., at 72, Bute-street, Cardiff. Mr. Wm. Dowdeswell, M.S.A., architect.

March 4.—**Newark.**—Granite, etc.—Supply to the R.D.C. of about 650 tons of granite, 900 tons of slag, 200 tons of tarmacadam, and 2,000 gallons of refined tar. Specifications, etc., from Mr. G C. Wooldridge, 63, Charles-street, Newark.

March 6.—**Rugby.**—Tar.—Supply to the U.D.C. of about 100 tons of refined tar for tar spraying purposes. Particulars of Mr. Jno. H. Sharp, Surveyor to the Council, Surveyor's Office, Benn-buildings, Rugby.

March 6.—**Worsley.**—Materials.—Supply the U.D.C. of road materials during the twel months ending March 31, 1917. Forms of tend of Mr. J. Howard, Surveyor to the Counci Town Hall, Walkden.

March 8.—**Loftus.**—Whinstone, etc.—Supp to the U.D.C., of broken whinstone and slag f six months. Copies of specifications, etc., Mr. Bernard J. Wormleighton, C.E., P.A.S. Surveyor, Town Hall, Loftus, Yorks

March 8.—**Wortley.**—Granite, etc.—Supply the Rural Highway District of granite, sla limestone, and tar macadam. Forms of tend of Mr. F. A. S. Crawshaw, Surveyor, 17, Ha market-chambers, Sheffield.

March 9.—**Hendon.**—Broken Granite, etc. Supply to the R.D.C. of road materials for s months from April 1, 1916. Forms of tender the Surveyor, Mr. J. A. Webb, Great Stanmo

March 10.—**Caistor.**—Granite, etc.—Supply the R.D.C. of granite, slag, and tar macada Forms of tender, etc., of Mr. A. A. Padle Clerk, Council Offices, Caistor, Lincs.

March 11. — **Willington.** — Road Metal. Supply to the U.D.C. of road metal. Form tender, etc., of Mr. J. H. Gardner, Surveyor the Council, Willington, Durham.

Auction Sales.

* February 29.—**Hammersmith.**—Mr. H. Smith will sell by auction, on the premises, stock, plant, and machinery of a builder, co tractor, and saw mill proprietor.

* February 29. — **Sutton.** — Messrs. Morga Baines, & Clark will sell by auction, on premises, a quantity of old building material.

* March 3. — **Tunbridge Wells.** — Mess Brackett & Sons will sell by auction, at Swan Hotel, freehold property.

* March 8.—**Hendon.**—Mr. Leslie Raymo will sell by auction on the premises, 81, Churc road, and Second-avenue, builders' plant, stoc and effects.

* March 8.—Messrs. Churchill & Sim sell by auction, at the Great Hall, Winchest House, Old Broad-street, E.C., an assortme of deals, battens, boards, timbers, etc.

[Those with an asterisk (*) are advertised in this issue.]

MUNITION FACTORIES, Etc.

SIEGWART FLOORS ARE THE SPEEDIEST PERMANENT FORM OF CONSTRUCTION.

BRITISH THROUGHOUT.

NO CENTERING REQUIRED.

PUBLIC BUILDING. DERBY.

The above view shows the simple method of fixing Siegwart Floors. The concrete beams, 10 in. wide, are supplied fully matured and have only to be grouted together after placing in position.

Full particulars from SIEGWART FIREPROOF FLOOR CO., LTD.,

Telephone: 4094 GERRARD. 231, STRAND, LONDON, W.C. *Telegrams: "NOCENTRING, LONDON."*

ES CURRENT OF MATERIALS.

g to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest st. Quality and quantity obviously affect prices which should be remembered by those who se of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
ocks	2 0 0
Stocks for Facings	2 12 0

1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
s	1 10 0	Best Blue Pressed Staffordshire .	4 14 0
Fareham	3 12 0	Do. Bullnose ..	4 18 6
Pressed on Facing	5 5 0	Best Stourbridge Fire Bricks ..	4 14 0
BRICKS— White,		D'ble Str'tch'rs	17 17 6
, and		Double Headers	14 17 6
Glazed hers ..	12 7 6	One Side and two Ends	18 17 6
	11 17 6	Two Sides and one End	19 17 6
Bullnose 4½ in.	15 17 6	Splays and Squints	17 7 6

econd Quality £1 per 1000 less than best.

	s. d.	
Ballast	7 9	per yard, delivered.
and Pit Sand	8 0	„ „ „
shed Sand	9 0	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
rtland Cement	2 5 0	..	2 8 0

2 1s. alongside in 80-ton lots.
te 2s. 6d. per ton extra on above.
ound Blue Lias Lime.... 1 3 6 at rly. depôt.
The cement or lime is exclusive of the ordinary charge for sacks.
one Lime .... 17s. 0d. per yard delivered.
dge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
TONE—delivered in railway trucks at bourne Park, Paddington, G.W.R., or Lambeth, G.W.R., per ft. cube	1 7
delivered in Railway trucks at Nine L. & S.W.R., per ft. cube	1 8¾
delivered on road waggons, Nine Elms	1 9¼
D STONE— Whitbed, in random blocks of 20 ft. rage, delivered in railway trucks at tbourne Park, G.W.R., South Lambeth, 7.R., or Nine Elms, or L. & S.W., per ft. e	2 5½
). delivered on road waggons at Pimlico arf or Nine Elms Depôt, per ft. cube ..	2 6½

Basebed, 2d. per ft. cube extra.

BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
in blocks..	2 0	Closeburn Red Freestone	2 2
blocks	1 7½	Red and White Mansfield Random block	2 9
in blocks	2 4		
Dale in	2 5	Yellow Magnesian Limestone do. do.	3 2

TONE—*Robin Hood Quality.*

Ft. Cube, Delivered at Railway Depôt.	s. d.
random blocks	3 4
r Ft. Super., Delivered at Railway Depôt.	
wn two sides landings to sizes (under super.)	2 5
bed two sides ditto, ditto	2 8
awn two sides slabs (random sizes)	1 0½
2½ in. sawn one side slabs (random sizes)	0 8¾
2 in. ditto, ditto	0 6¾
ORK—	
r Ft. Cube, Delivered at Railway Depôt.	
random blocks	3 0
r Ft. Super., Delivered at Railway Depôt.	
n two sides landing to sizes (under 40 ft.	2 3
bed two sides ditto	2 7
n two sides slabs (random sizes)	1 0
-faced random flags	0 5

TILES.

Per 1000 f.o.r. London.

hine-made tiles or hand-made sand- tiles from either Broseley or	£ s. d.
dshire district	2 12 6
tal ditto	2 15 0
valley tiles (per dozen)	0 5 6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£ s. d.
e Bangor slates, 20 by 10	11 16 0
ality „ „	11 10 0
„ 16 by 8	5 15 0
e Portmadoc, 20 by 10	11 13 6
ality „ „	11 3 6
„ 16 by 8	5 15 0

WOOD.

ILDING REDWOOD.

nported sizes.	Per standard. £ s. d.		£ s d.
in. by 12 in., 4 in. 1 in., 3 in. by 11 in., . by 9 in., and 2 in. 11 in.	28 10 0	..	29 10 0
y 9 in., 2½ in. by 9 in., 2 in. by 9 in.	27 10 0	..	28 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard. £ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in.			
2 in., 2½ in., and 3 in. by 7 in.			
2 in., 2½ in., and 3 in. by 6 in.			
2 in., 2½ in., and 3 in. by 5 in.	23 10 0	..	24 10 0
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.			
3 in. by 4 in., and 3 in. by 4½ in.			
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0		more than
¾ in.	1 0 0		battens.
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best.
Best Middling Dantzic and Memel Fir Timber Logs (average specification) ..	Per load of 50 ft. cube. 8 10 0	..	—
Seconds do. do.	8 0 0	..	—
9 in. to 10 in. do.	7 0 0	..	—
6 in. to 8 in. do.	6 10 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	10 0 0	..	11 0 0
Do. 6 in. to 10 in.	8 0 0	..	9 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Rio do.	23 0 0	..	25 0 0
Under 2 in. thick	0 10 0		extra.

JOINERS' WOOD.

White Sea First Quality Red:			
4 in. by 11 in.	35 0 0	..	36 0 0
3 in. by 11 in., and 2 in. by 11 in.	34 0 0	..	35 0 0
4 in. by 9 in.	33 0 0	..	34 0 0
3 in. by 9 in., and 2½ in. by 9 in.	32 0 0	..	33 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	24 0 0	..	25 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Seconds quality	2 0 0		less than best.
Third quality	£2 to £3		less than seconds.
Archangel White Deals—			
Best 3 in. by 11 in.	28 0 0	..	29 0 0
3 in. by 9 in. and 10 in.	26 0 0	..	27 0 0
Seconds, do.	1 10 0		less than best.
U.S. Battens	19 10 0	..	20 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 7 in. planed and shot	1 8 6	..	1 13 0
1¼ in. by 7 in. planed and matched	1 9 0	..	1 13 0
1 in. by 7 in. planed and shot	1 3 0	..	1 6 0
1 in. by 7 in. planed and matched	1 3 0	..	1 7 6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0 18 0	..	0 19 6
1 in. by 7 in. do.	1 3 0	..	1 5 6
⅝ in. by 7 in. do.	0 14 0	..	0 15 0
	Per standard.		
Columbian or Oregon Pine, best quality	35 0 0	..	40 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		„
Seconds, regular sizes	43 10 0		„
Oddments	37 10 0		„
Kauri Pine—Planks per ft. cube	0 7 6	..	—
Oak Logs—			
Large, per ft. cube	0 6 0	..	0 6 6
Small „ „	0 5 0	..	0 5 6
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super, as inch	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut..	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 5 0	..	21 5 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

METALS (*Continued*)

IRON—	Per ton, in London. £ s. d.		£ s. d.
Common Bars	15 10 0	..	—
Staffordshire Crown Bars, good merchant quality ..	15 10 0	..	16 10 0
Staffordshire "Marked Bars"	17 0 0	..	17 10 0
Mild Steel Bars	16 10 0	..	17 0 0

Steel Bars, Ferro-Concrete quality, £17 10s. basis price.

Hoop Iron, basis price	18 10 0	..	19 0 0
„ „ Galvanised ..	30 0 0	..	35 0 0

(* And upwards, according to size and gauge.)

Sheet Iron Black—			
Ordinary sizes to 20 g.	18 10 0	..	19 0 0
„ „ 24 g.	19 10 0	..	20 0 0
„ „ 26 g.	20 10 0	..	21 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	29 10 0	..	—
Ordinary sizes to 26 g.	32 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g. ..	30 0 0	..	—
„ „ 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	28 10 0	..	—
Ordinary sizes, 26 g.	29 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 15 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 0 0	..	—
Best Soft Steel Sheets, 26 g. ..	21 15 0	..	—
Cut Nails, 3 in. to 6 in.	18 10 0	..	19 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

	£ s. d.		
LEAD—Sheet, English, 4 lb. and up	38 0 0	..	—
Pipe in coils	38 10 0	..	—
Soil pipe	41 10 0	..	—
Compo pipe	41 10 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—				
Strong Sheet	per lb.	0 1 5	..	—
Thin „	„	0 1 6	..	—
Copper nails	„	0 1 5	..	—
Copper wire	„	0 1 5	..	—
BRASS—				
Strong Sheet	„	0 1 3	..	—
Thin	„	0 1 4	..	—
TIN—English Ingots ..	„	0 1 10	..	—
SOLDER—Plumbers' ..	„	0 0 10	..	—
Tinmen's	„	0 1 0	..	—
Blowpipe	„	0 1 2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5½d.	32 oz. thirds	8¾d.
21 oz. thirds	6½d.	„ fourths	7½d.
26 oz. thirds	7d.	Fluted Sheet, 15 oz.	5¾d.
„ fourths	6¼d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4¼d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white ..	5d.
Ditto, tinted	6¼d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 9
„ „ „ in barrels ..	„	0 3 10
„ „ „ in drums ..	„	0 4 1
Boiled „ „ in barrels ..	„	0 4 0
„ „ „ in drums ..	„	0 4 4
Turpentine in barrels	„	0 4 1
„ in drums	„	0 4 4
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	47 15 0
Red Lead, Dry	per ton	46 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	59 15 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to THE BUILDER LTD., and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

◆

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ACCRINGTON.—For painting the whole of the exterior and painting and decorating part of the interior of the Victoria Hospital. Mr. W. J. Newton, M.S.A., Hon Architect, Town Hall :—

J. Whittaker ..	£326 15	W. Holgrave ..	£150 10
J. Macfayden ..	177 10	H. Holgrave* ..	149 7
J. Wilkinson ..	171 5		

[All of Accrington.]

ADWICK-LE-STREET.—For certain sewer extensions at Skellow, for the Adwick-le-Street Urban District Council. Mr. G. Gledhill, Surveyor, Council Offices, Adwick-le-Street :—

A. Storey	£589	5	3
H. Roberts	469	9	0
H. Drake & Co.	450	0	0
F. Haslam	382	2	0
Lockey & Dunbar	335	5	6
Swift Bros.	308	0	0
E. S. Knight, Springwell-lane, Doncaster*	305	2	0
H. C. Pullar & Co.	299	9	0

Russian
AUSTRIAN and JAPANESE
PRIME DRY
WAINSCOT **Oak**
SYDNEY PRIDAY,
KING WILLIAM HOUSE, 2a, EASTCHEAP, LONDON, E.C.
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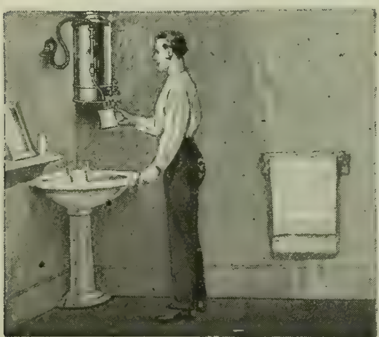

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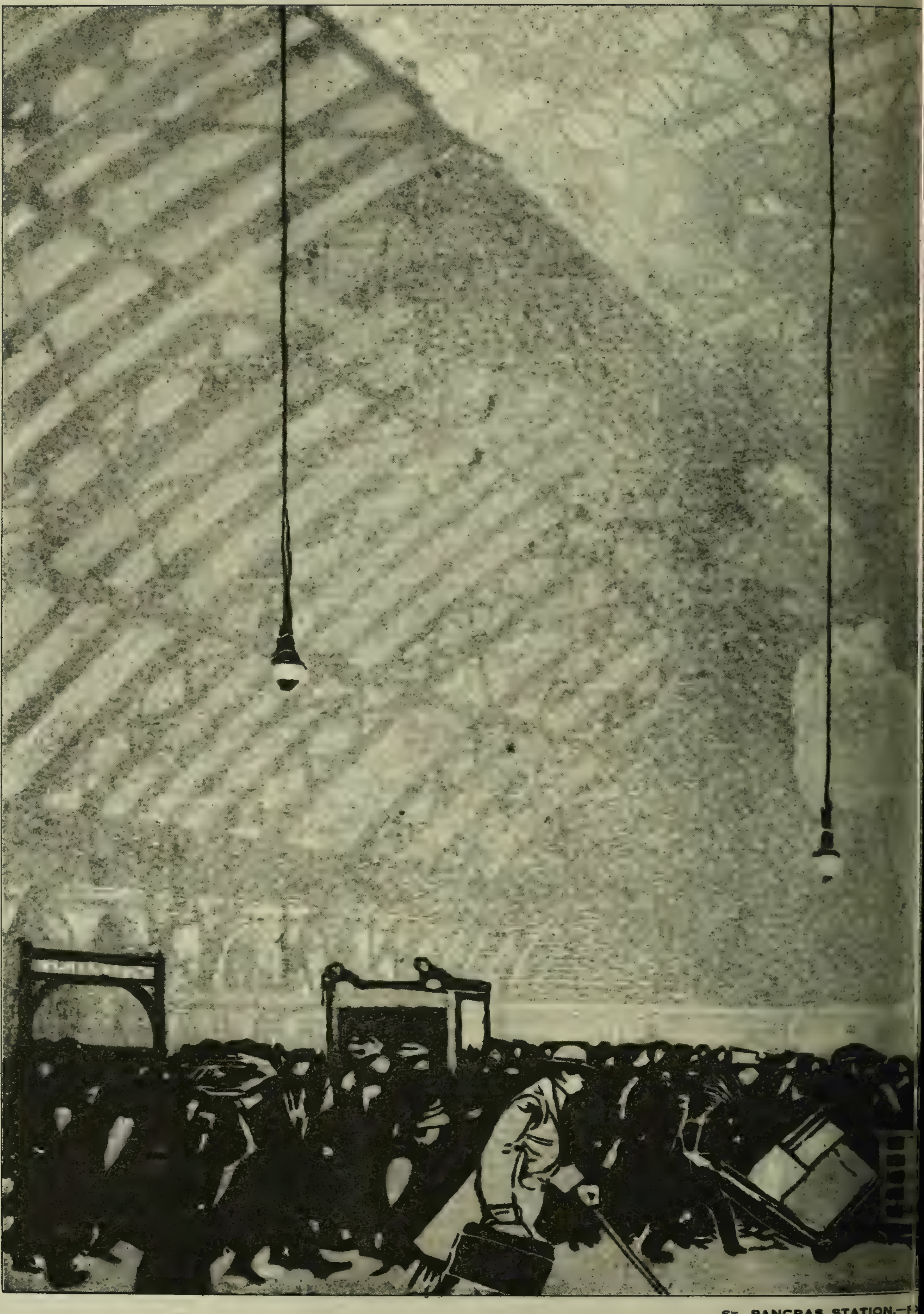

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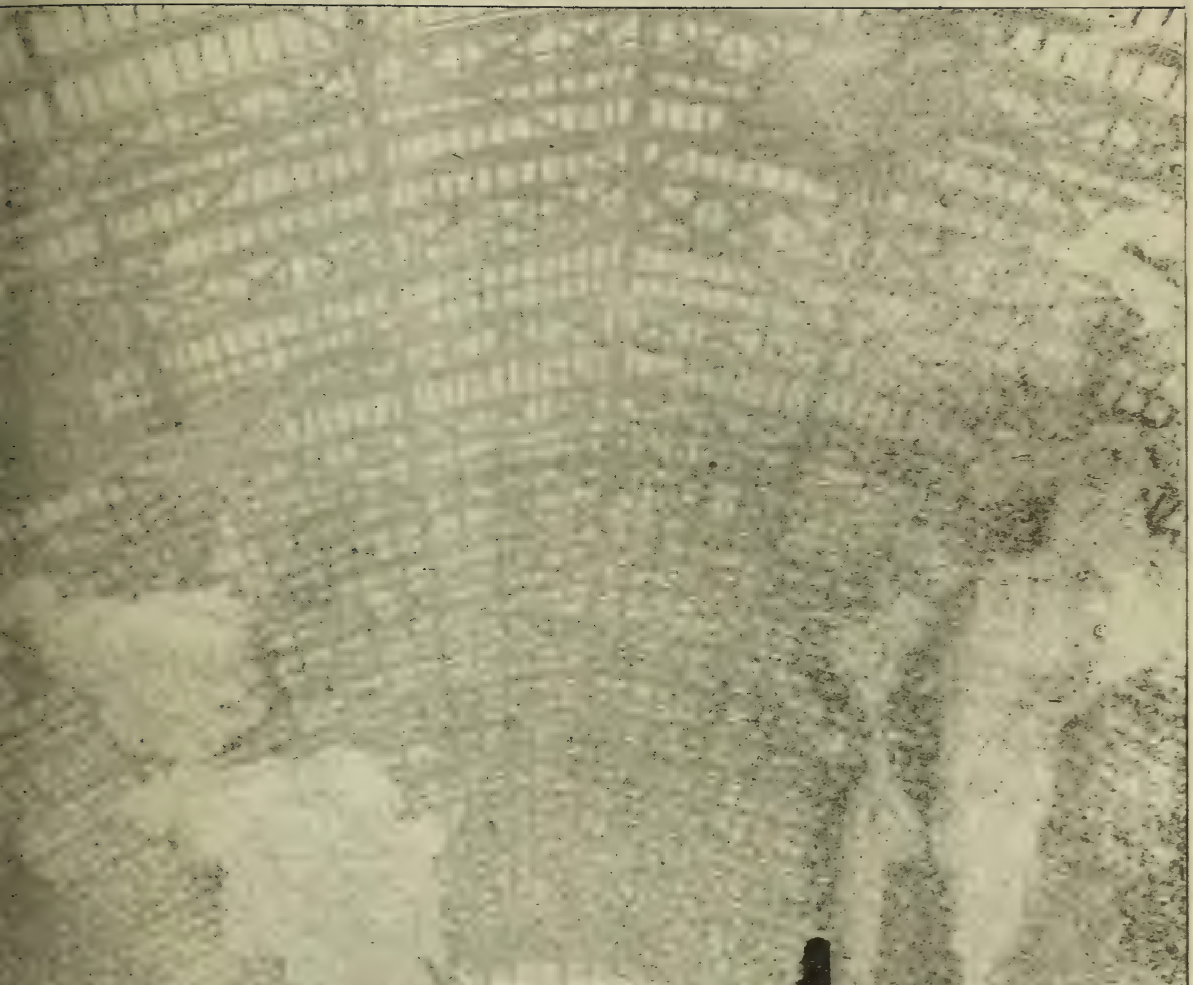

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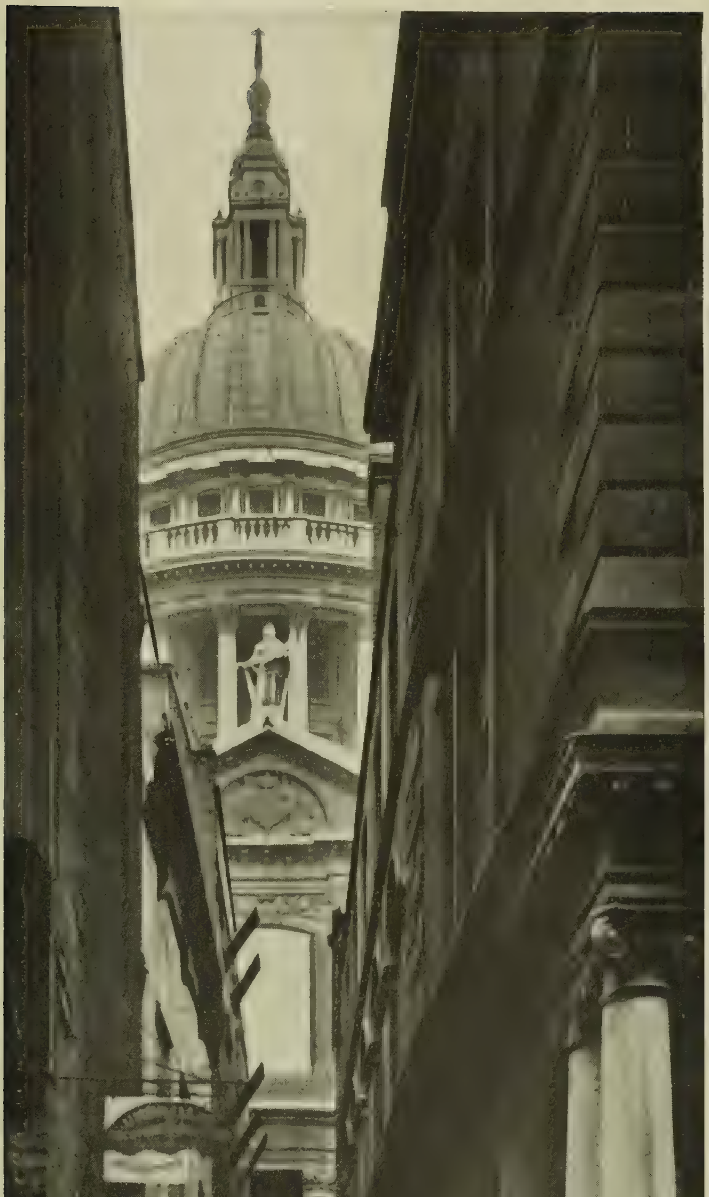
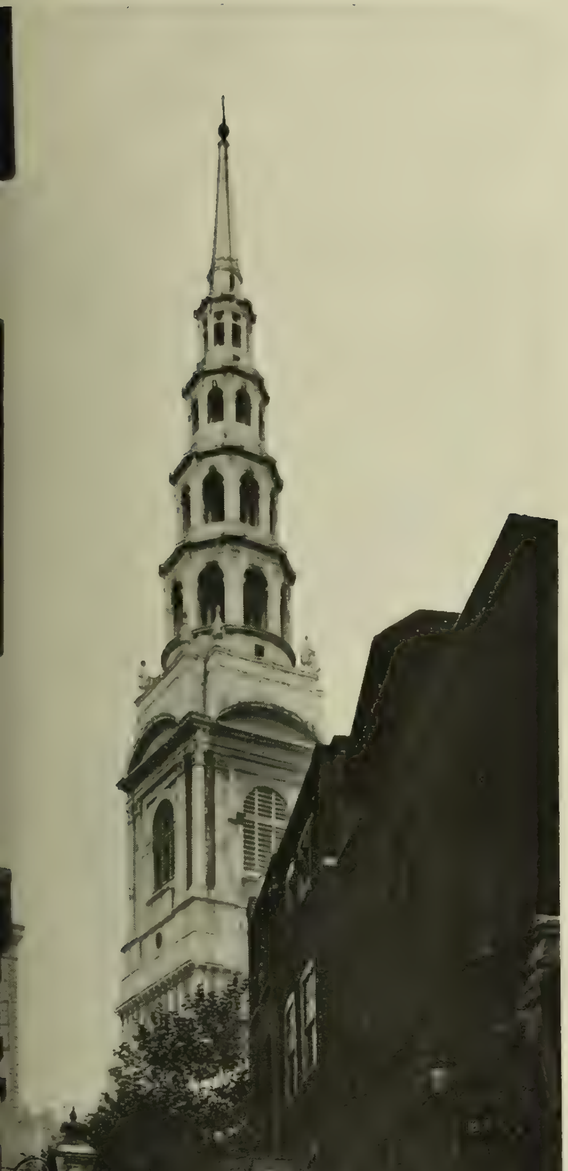
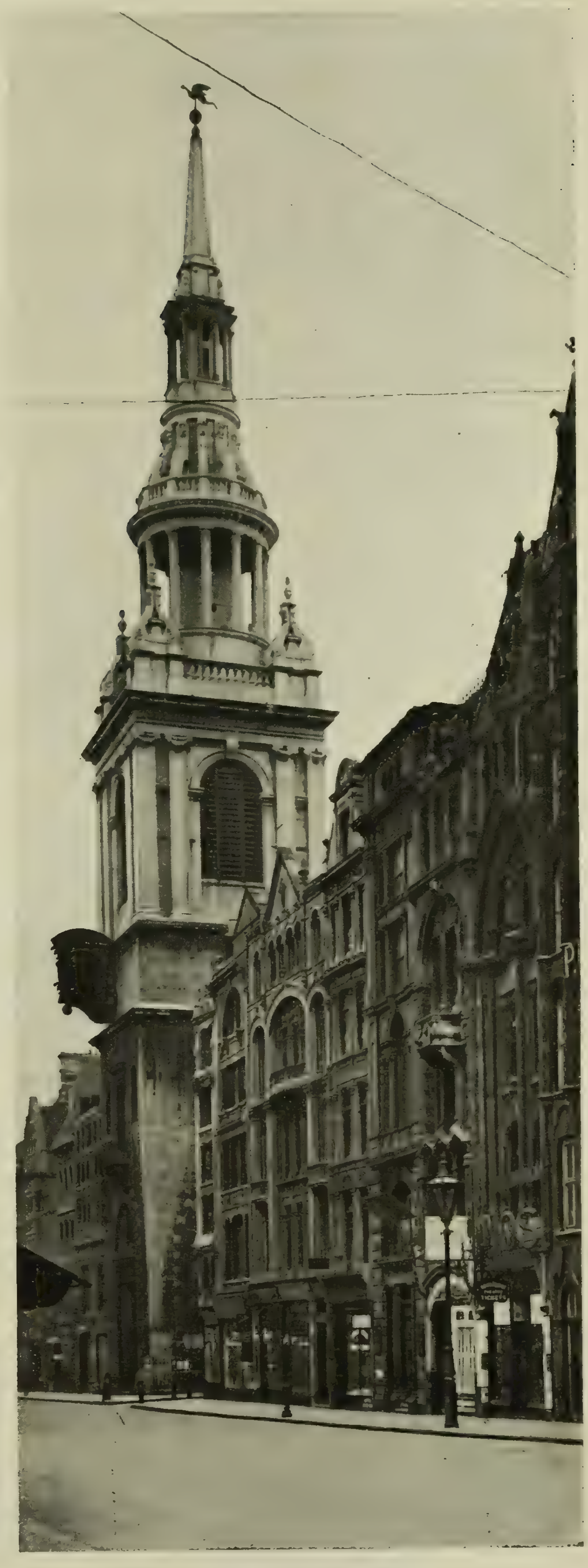


ST. PAUL'S, FROM CANNON ALLEY.

PHOTO: GEO. TROTMAN.



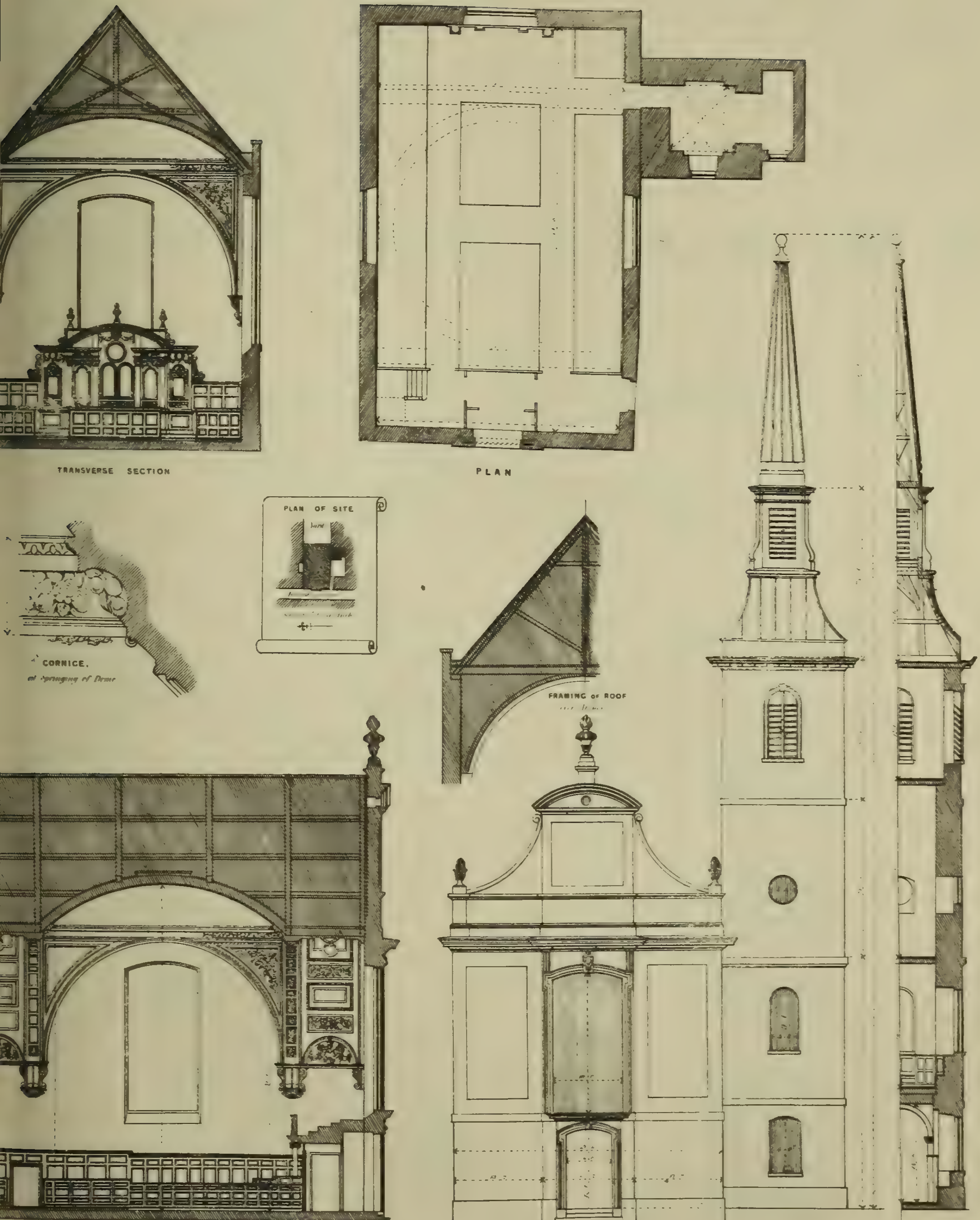
ST. BRIDE, FLEET STREET, E.C.



ST. MARY-LE-BOW, CHEAPSIDE.

WREN'S CHURCHES.

PHOTO: GEO. TROTMAN.



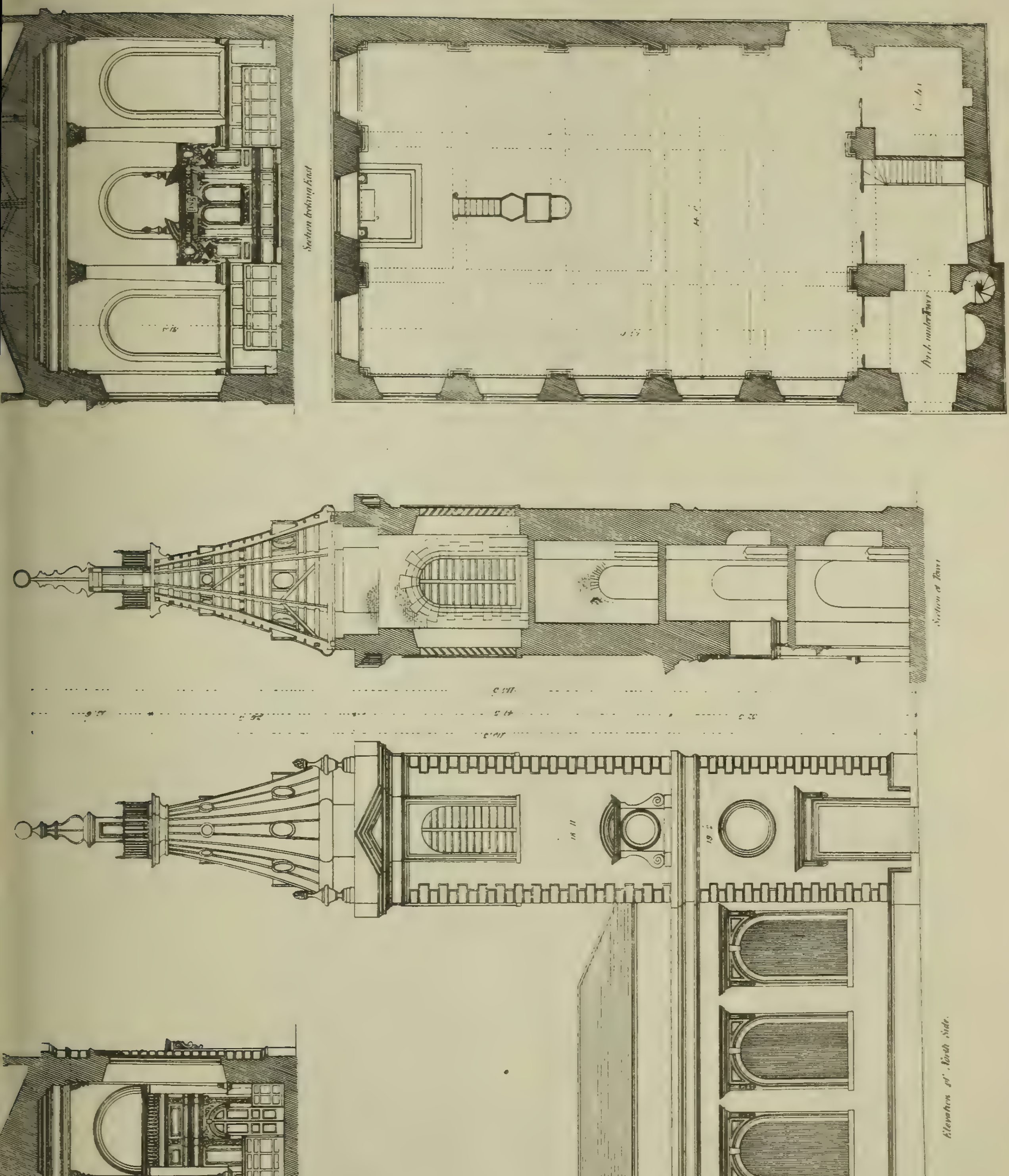
TRANSVERSE SECTION

PLAN

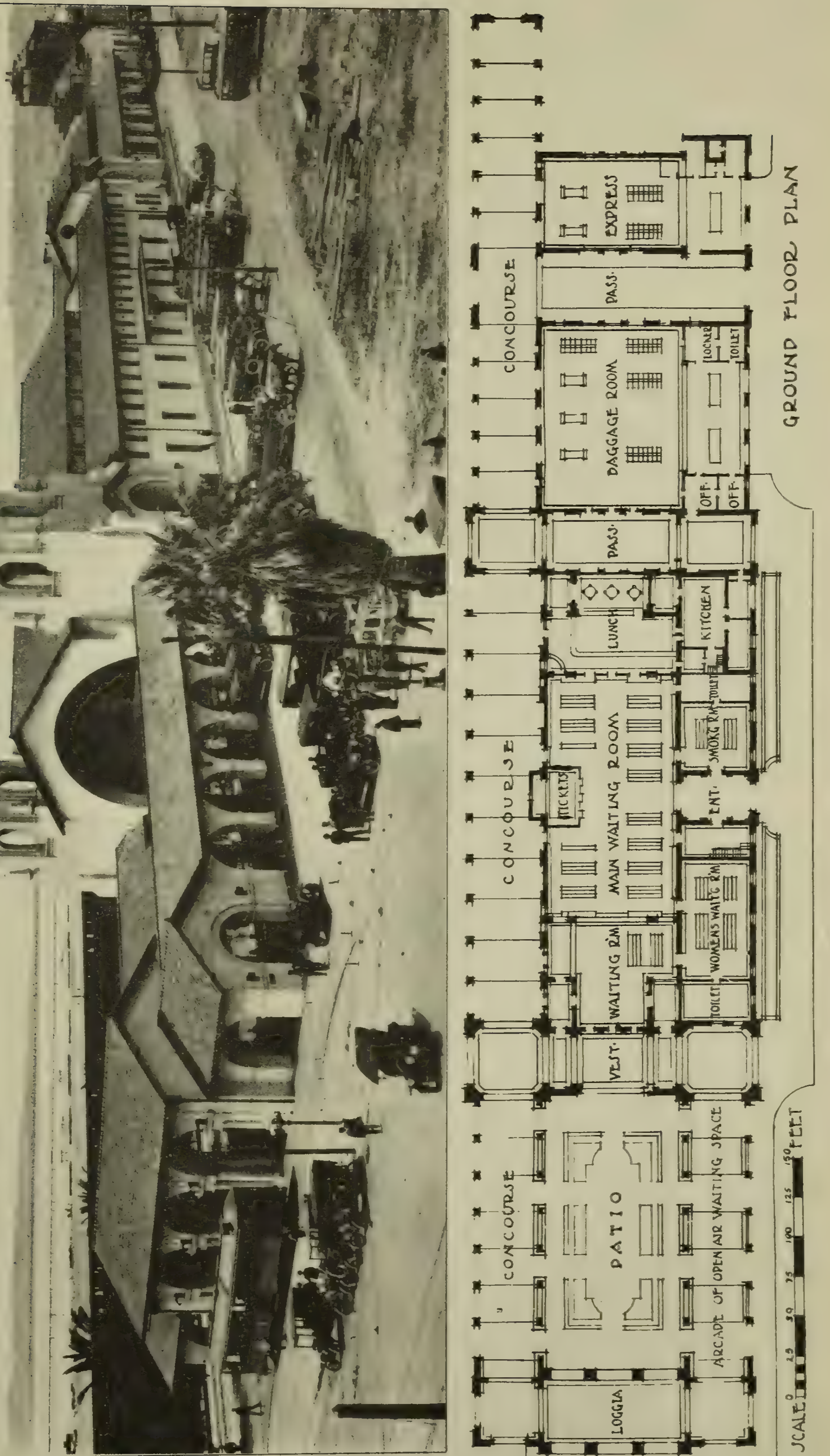
LONGITUDINAL SECTION

WEST ELEVATION

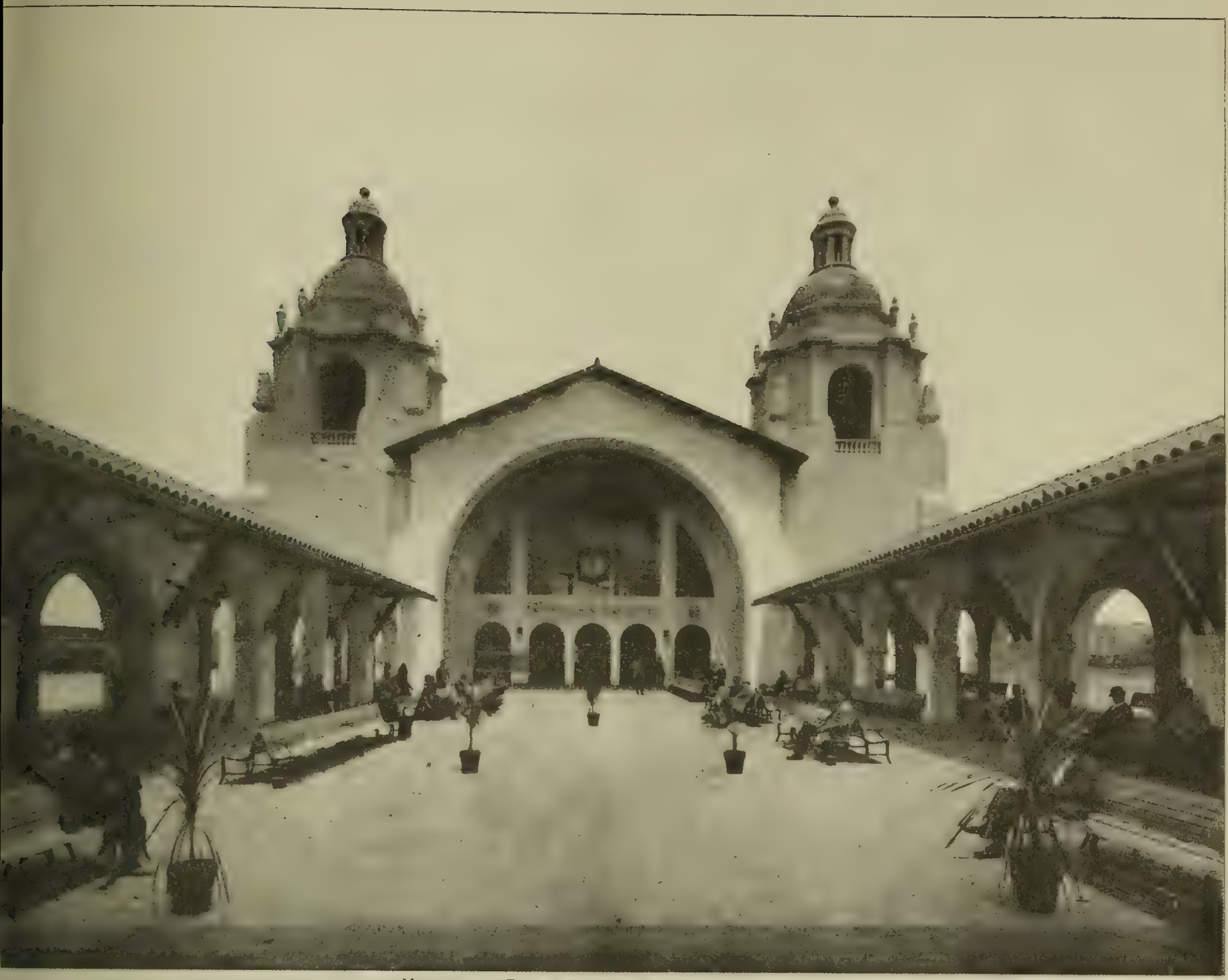
WREN'S CHURCHES: ST. MILDRED, BREAD STREET.



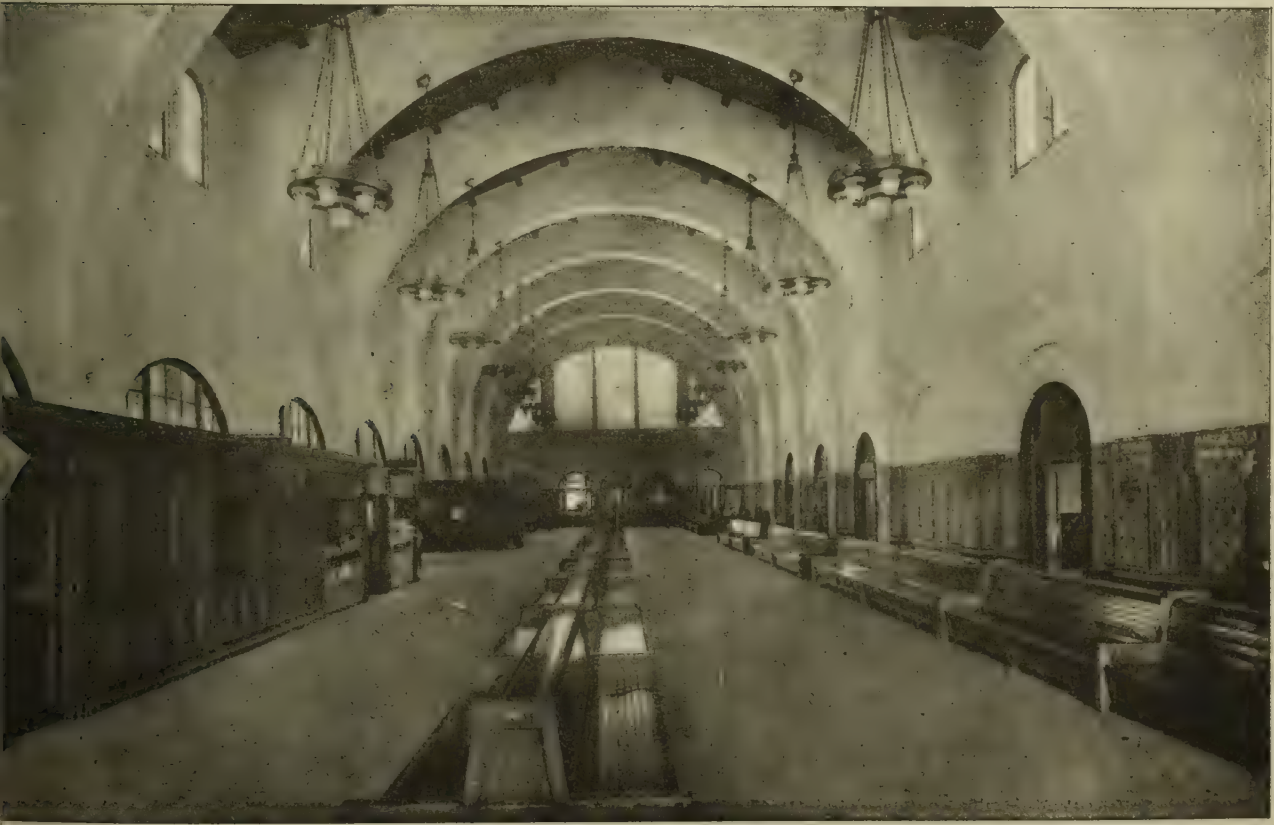
WREN'S CHURCHES: ST. NICHOLAS, COLE ABBEY.



SANTA FÉ RAILROAD STATION, SAN DIEGO, CAL.—MESSRS. BAKEWELL & BROWN, ARCHITECTS.



View from Patio looking toward Main Entrance.



Interior of Main Waiting Room.

SANTA FÉ RAILROAD STATION, SAN DIEGO, CAL.—Messrs. Bakewell & Brown, Architects.

From "The Brickbuilder," Boston.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

OL. CX.—No. 3813.

MARCH 3, 1916.

IS WAR GOOD FOR ARCHITECTURE?

WHEN the war was but a few weeks old one of our senior architects, in addressing certain younger members and students of the profession, told them that "war was good for art." He evidently desired to signify that art of architecture was specially included in the maxim, and ffered it as a cheering promise held out to architects by ageddon. The note he struck was one of stalwart mism. "Bear up, brothers!" he said in effect. "War may terrible thing, but—be of good cheer: it is good for itecture." He was supported by another eminent exponent e art of building, who held out this same message of hope independent idea for which he took personal responsibility, the precept may therefore be supposed to be rooted in the er wisdom that trims the sails and directs the course of itectural taste. To what extent the apothegm nourished young men who on such occasions are supposed to sit with ls held open to receive what is put into them is beyond ecture, but the question raised is of some interest.

t is evident that the speaker referred to the art of itecture, and not by any means to the profession, for that d have been a fatuous commonplace, true indeed, but true out wisdom or even good sense. A man might with as h weight say that "war was good for agriculture," having ind that it broke up and manured the land. It is obvious war which knocks down buildings and lays architects in the may be crudely said to benefit a profession which thrives e there are many buildings to design and few architects sign them. This was certainly not the speaker's meaning. t he intended to convey, of course, was that war is good he art of architecture, because it reacts on national ideals emotions, rendered stale by the *ennui* of prosperity, and s about changes of feeling which conduce to an epoch of expression in art. War, in his opinion, purges the *blasé*, c sentiments of a people and re-establishes a more itive, and therefore a more wholesome and vigorous, ional sense.

ut what does all this amount to? A revolutionary change tional concepts would certainly not help the established tect to an enlargement of his attainments or lift him to a r plane of achievement. Such readjustment of public would rather spell disaster for any man who has outlived eceptive years of his life. It is clear that the speaker did uppose that war was going to benefit him or his contem- ies, for he would realise that it would thrust him into rity by bringing into discredit the whole system of ideas hich he had learned to express himself. It would set up tem to which he was a stranger. He would lose foothold be compelled, at the sedate climacteric, and burdened the mental habits of half a century, to clamber to a new ence from which to proclaim himself. Othello's occupation d be gone!

or could the speaker suppose he was offering any very arating prospects to the young men whom he addressed. young men could hardly be expected to look forward glad anticipations to a future in which their convictions d become a heresy and their aspirations a staled memory. , too, would expect to suffer in proportion as his attain- s were great or small. The more each had acquired by and industry the more he would have to discard; the steadfast the enthusiasm of each the more difficult his nment under the new order. In the *mêlée* of readjustment ho had the least to divest himself of would be the first off nark and the lightest burdened. The race he was engaged in would be stopped in mid-course, and the runners turned about towards a new winning-post from which the leaders would be furthest removed. The first would be last and the last first. This is not a proposal likely to fire the hopes of runners who have embarked in a race with intention of keeping a good place in it, and such runners are the only sort worth talking about.

The above considerations make it clear that the speaker desired to convey by his maxim that the changes in our national life, sentiment, social codes, fashions, ideals, ethics, and religious temper, brought about by stress of war, are such as conduce to the upraising of "schools" of art which are marked by posterity as constituting great epochs. It does not, however, appear that even this exalted conception is such as could be expected to fire the ambition or soothe the perturbations of the most steadfast prig in any audience of young men. Art and unction have been kept apart, and rightly so, ever since Ruskin showed how they can disport themselves when in leash; and of all those unmanly qualities of which war is destructive surely unctuousness is the most vulnerable. The prig is an exotic blooming in an emasculated civilisation. He is a counterblast to degeneracy, and that is the best that can be said for him. Social perversions manure his roots and keep him in blossom. The thing that fires the aspirations of the artist is not flummery about the dignity of art or the mission of the artist, but the passionate desire of a man who is more keenly and feelingly alive than his fellows to express himself supremely, here and now. He craves the power and the will to so excel and the luck to succeed, and the man who does so excel, whether he finds success or not, is *ipso facto* a great artist of his own time. Whether he is to be a great artist of any other time will not trouble him; but unless he is a great artist of his own age—a man who reflects his environment, and whose art reacts or comments on the sentiments and moods of the times in which he lives—he will assuredly be esteemed a great artist in no age at all. He will be regarded as a crank while he lives and a cipher when he is dead. A man indeed cannot get away from the associations of his time; he could as easily get out of his skin, and his contemporaries cannot gauge his merits except through the mist of prejudices of thought and feeling which enshroud both them and him alike. They cannot see his work in the perspective of the future. Moreover, an artist is no more responsible for the subtle quality of personality which makes his creations esteemed of posterity than he is accountable for the shape of his ears; and an artist, or group of artists, can no more hope to consciously build up a great school of art than a farmer, or a syndicate of farmers, can bring about a good year for turnips. No architect, however well backed up by war, could survive the enervating consequences of being taught that he was embarking upon the upraising of a great art, which is the first lesson in the first page of the first chapter of the prig's text-book. It is stimulating to look back on history and recall how many of the world's masters in the arts worked in poverty and distress. They had, in necessity, a better motive than duty to their art. They did not work to meet the calls of a system of expression; they worked to meet the calls of landlord.

It was Ruskin, in the "Crown of Wild Olives," who in his overwhelming, dogmatic, and entrancing manner laid down, and first popularly laid down, that on a wide survey of history "you *must* have war to produce art." "As peace is established or extended in Europe the arts decline." "Peace and the *vices* of civil life only flourish together." "The words that the Muse of History couples together are—peace and sensuality—

peace and selfishness—peace and death." This teaching has been disposed of more or less satisfactorily by writers who have shown that there has never been such a cessation of war as would warrant a conclusive observation. The history of Europe has been the history of phases of war; its waxing and waning; its recuperations and preparations. The subject is too large to discuss here, and the question, "Will the present war be good for architecture?" is on entirely another plane. To introduce the idea that war should set us cogitating oursel for the revelation of a great art is to take a step towa re-establishing that very system of unwholesome, mawk introspection which it is the good office of war, if it has a good offices, to discredit and wipe out. To inculcate such id is to encourage architects to follow the example of th philosophers of whom Carlyle said that they sought apocalypse of nature in the study of their own navels.

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NOTES.

Charing Cross Bridge.

We are glad to read in the *Times* a protest signed by Mr. Ernest Newton, as President of the Royal Institute of British Architects, and Sir Aston Webb, as Chairman of Council London Society, protesting against the adoption of the South-Eastern Railway Company's proposal to strengthen one-half of Charing Cross Bridge by casing the existing piers with stonework. It is pointed out that the work will add nothing to the much-needed accommodation for road traffic across the river at Charing Cross, and will tend to prolong the existence of the present unsightly bridge for an indefinite period. Though the work is not to be undertaken until the termination of the war, it is feared that if the railway company obtain powers the work may be put in hand without adequate discussion. A strong case may be made out for the removal of the station to the southern side of the river, apart from which the whole scheme appears to be a piece of unsatisfactory patchwork which neither from a constructional nor æsthetic standpoint will meet with approval from those who have considered the problem. The removal of the station and the building of a really fine bridge at this point approached from Trafalgar-square would be a scheme which would commend itself to all as a fine memorial of the present epoch in our history.

Economy in Public Services.

The Press gives indications of the manner in which the Government proposes to promote economy, over which the *Observer* indulges in a little stately mirth. We learn that the expense of a periodical search for conspirators in the vaults of the Houses of Parliament by the aid of lanterns is to be discontinued, and that stationery supplies are to be cut down by the substitution of half for whole sheets of paper and even by a saving in the cost of envelopes! Further, we know that museums are to be closed, that children under five are not to be admitted to schools except in special cases, that powers should be obtained to *enable Old Age Pensions to be temporarily suspended when the pensioners' means are increased above the statutory limit*, but only, it is stated, *temporarily*. We wonder why? We do not suggest that these and other economies are not altogether praiseworthy, and that by an indefinite multiplication of such items it may be possible to pay the expenses of the war for two days, but we think that the greatest of all economies now and in the future is probably to be found in employing the right men in the right places, in spite of time-honoured precedent to the contrary. It is said by some extremists that architects know more about the design and construction of buildings than eminent Royal Engineers, and that they might do more service to the State in doing work they understand than in becoming ordinary munition workers. Still, it is possible that they are wrong, and that the general public should employ engineers as architects, and perhaps discover the architects' real *forte* to be horticulture or laundry-work. Many Gilbertian positions have arisen in our midst the literary treatment of which should form a fruitful theme for future novelists.

The Lady Architect Again.

The pages of the *Bystander* contain an eloquent plea for the lady architect and a vigorous denunciation of the sins of the ordinary men who fail so pitifully in that capacity. Why, it is asked, is woman, who lives most of her time in houses, which are shockingly planned by man, not to have any room she may call her own? The man has his dressing-room and his study all to himself; while woman is only allowed an uncertain share of the common rooms of the house. The article is illustrated, not with plans of an ideal house, or even diagrams showing the errors made by man in his planning, but by figure studies which, though charming, are scarcely germane to the subject. We have that hardy perennial complaint of the absence of cupboards which, until she comes to plan, the woman imagines take up no space and cost nothing at all. There is a great opportunity which the pioneers of the woman's movement might seize at the end of the war. Why not have a garden city laid out by women, its houses built by women, and its finances organised by women? In such a city truly we might be a little nearer Heaven than elsewhere; in such a city every house might be a ha of refuge. No chimney would smoke, no draughts be felt; we sho be surrounded with cupboards in every room; all windows wo look due south except the kitchen and larder; all windows wo have the best views. The rates might indeed be high, as s houses, though economical to build—for nothing would be forgotten overlooked—would be so much sought after that rents and ra would rise, unless indeed the syndicate removed that difficulty wise enactments. The only drawback would be the nuisance cau by the remaining men architects—the last of an evil generation—w would be always measuring and sketching in the vicinity.

Germany at Work.

Mr. Joseph Pennell sees, like all great artists, bea in the modern development of science, and at Leicester Galleries the exhibition of drawings a lithographs serves as a reminder to all of us of wonders of the age in which we are living. The view of "Vul Shipbuilding Yard" (No. 9) shows a great steel-framed shed of wh Mr. Pennell says: "As beautiful as the wooden roof of a cathedra quite as difficult to draw and much more exciting." While the "Gas Works at Berlin" he writes:—"The gasometers built inside the great castles, and so become picturesque instead eyesores." We admit the picturesqueness, but question whet the *raison d'être* of the construction can be defended any more th that of the Tower Bridge. "Building the Bridge, Cologne," is of the most vivid and arresting of a very fine series of drawin while two views of Leipzig Station, now under construction, fo magnificent subjects for Mr. Pennell's skill. He compares Engl architecture—which "looks all alike"—and American buildings which "look like Greek temples"—unfavourably with Germ buildings—which "look what they are." We think that the ha of sketching buildings under construction possibly prevents artist from giving due weight to their value when completed, wh is where German work usually fails. Another very fine subject is t "Building of Bismarck No. I., Hamburg"—a view of the gigan ship end on, with an immense crane over it. All should make point of visiting the exhibition, which gives an impression both Mr. Pennell's skill and the world of energy and purpose which behind Germany. In the same galleries is included an exhibition the delightful work of Mr. George Wetherbee, R.O.I. His pictu are full of warm mellow colour and atmosphere, and it is diffic to pick out examples where all reach so high a standard. Perha we may say that No. 29 ("Where Virgil Sang"), No. 7 ("The Da Hill"), and No. 25 ("A Veiled Sunset") were among the pictu which pleased us best.

A Great Londoner.

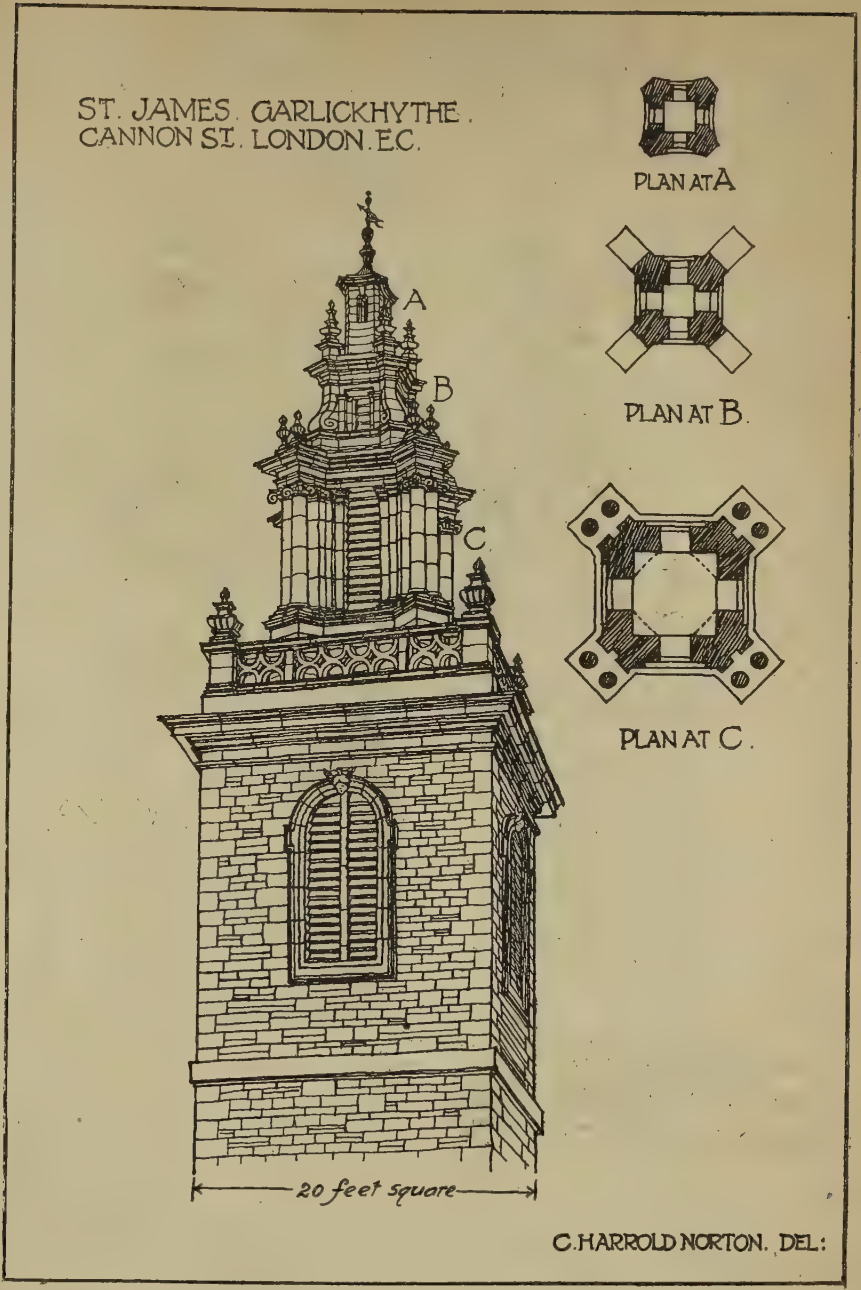
By the death of Sir Laurence Gomme London los one of her most prominent citizens, a personal closely connected with the pioneer work of London County Council—the first real expression the determination to make the metropolis something better than agglomeration of local vestries presided over by that mysteri body, the Metropolitan Board of Works. Sir Laurence Gomm ambition was that the Council should become the most perf example of municipal administration in the kingdom, and he devot all his powers of organisation to that end. In common with that Mr. Riley, his name will be remembered for the pioneer services has rendered to the great new municipality and its ever-extendi requirements, and to the clear grasp of broad principles by the rec nition of which alone order could be evoked out of chaos. The act period during which he held the office of Clerk to the Council fourteen years, from 1900 to 1914; but his whole working career spent in the service of the Metropolitan Board of Works and London County Council, and his hours of recreation were larg taken up with studies bearing on the history and associations of city in which he took such pride. Every movement for the preser tion of historic London and the betterment of new London found him a strong supporter, while his literary bent was evidenced in editing of the *Antiquary*, the *Archæological Review*, and the *Folkl Review*. He founded the Folklore Society, and was the aut of many works on folklore and other antiquarian subjects. personality was singularly winning, and his loss will be felt by a v large circle of frends as well as by the Council of which he was long so distinguished a servant, but many now living have be inspired by the example of his energy and enthusiasm.

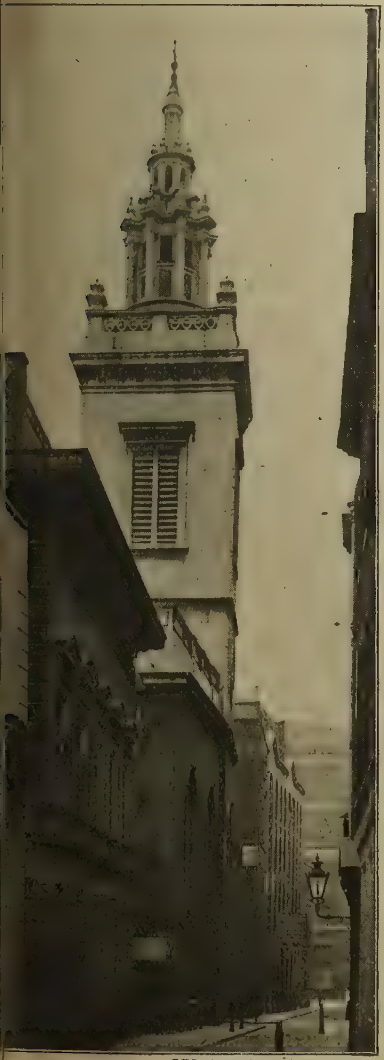
E LONDON CHURCHES 'F WREN AND LATER .RCHITECTS OF THE ENAISSANCE.

No. XVII.—St. James, Garlickhythe.

E church of St. James, Garlickhythe,
Garlick-hill, between its upper termina-
by Mansion House Station and Upper
ies-street. Garlick-hill owed its name,
ding to Stow, to the fact that garlick
sold on the banks of the river near the
h.

former church, which contained monu-
s to Lady Stanley, whose husband had a
ion on Paul's-hill Wharf, and to her son,
ied in the Great Fire, and the present church
built by Wren, its foundation-stone being
n 1676 and its final completion taking
in 1683. The church has narrow aisles
ated from the nave by Corinthian columns,
ntablature of which is returned towards
uter walls in the centre, thus indicating
iform outline. The ceiling of the nave is
, the window-heads breaking into the
of the cove with plaster groins as in
allows, Lombard-street, and other churches
period. The church is well lighted by
ws in each side, but the decorative scheme
leasing and the woodwork commonplace.
xterior treatment is vigorous if a little
, the tower being flanked on either side
rved and pedimented wings. The design
steeple is composed of three square stages,
wer marked by two columns at each
set diagonally, and the middle by curved
s carrying up the line of the angular
tions below, while the topmost stage is
with canted angles and urns standing above the trusses under. The balustrade of the tower is formed of the curved and pierced stonework often employed by Wren in his freer designs. Above the entrance is a fine clock surmounted by the figure of St. James.





[Photo: Geo. Trotman.

Wren's Churches: St. Michael's, Paternoster Royal.

The only monument of interest in the church is that to Seagrave Chamberlain, dated 1675, on the north wall.

With the parish is united that of St. Michael, Queenhithe, which stood on the north side of Upper Thames-street, and was demolished in 1876, which we illustrated in our issue of February 11. Trinity the Less was one of the churches destroyed in the Fire and not rebuilt, its parish being united with St. Michael, Queenhithe. Its name is preserved in Great and Little Trinity-lanes. The advowson of the church of St. James, Garlickhythe, has been, since the reign of Mary, in the hands of the Bishop of London.

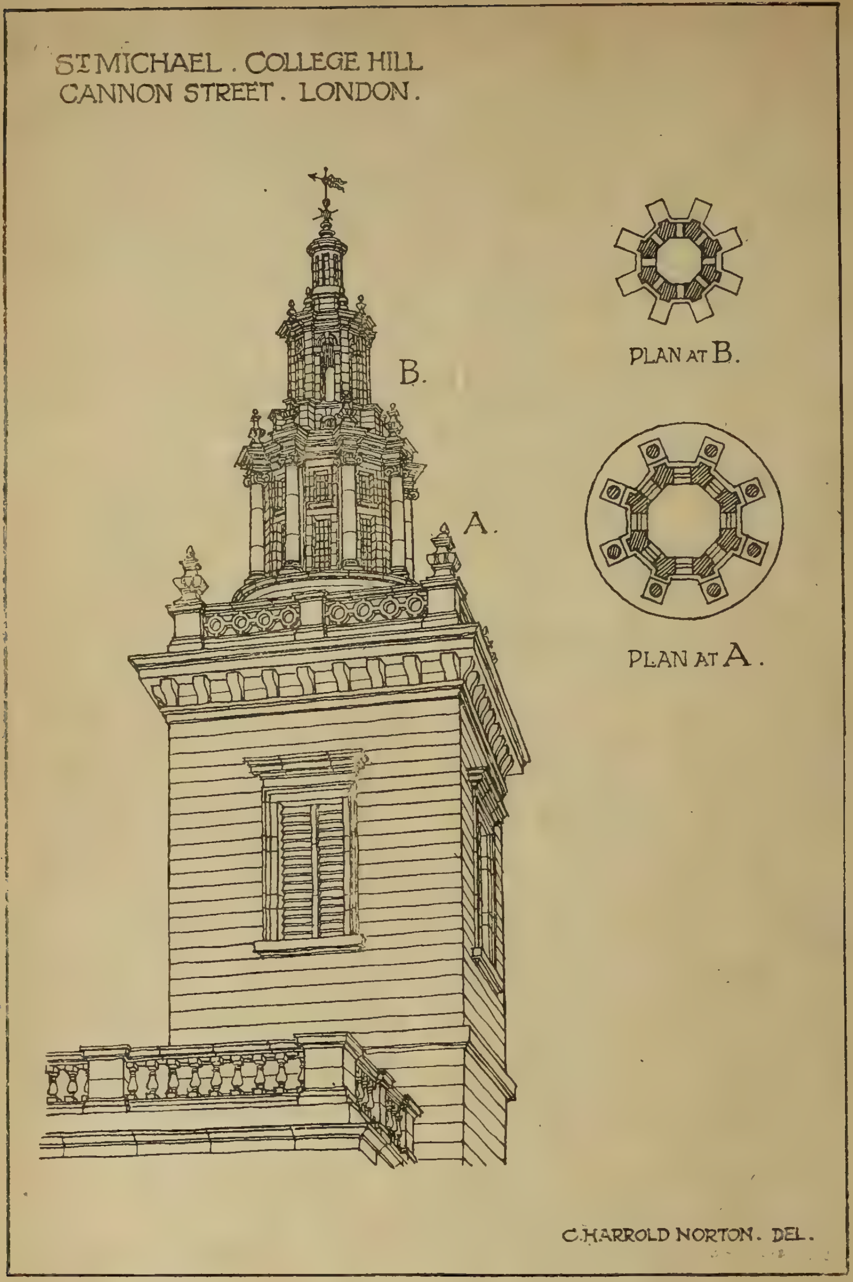
No. XVIII.—St. Michael, Paternoster Royal.

The church of St. Michael, Paternoster Royal, derives its title from the ancient names of adjoining lanes, Paternoster-lane and La Riole, probably so called because it was inhabited by wine merchants trading with La Riole, near Bordeaux, the name being subsequently corrupted to "Royal."

St. Michael now serves as the parish church for four benefices, viz., St. Michael, Paternoster Royal; St. Martin, Vintry; All Hallows-the-Great and All Hallows-the-Less. St. Martin Vintry, and All Hallows-the-Less were not rebuilt after the Fire. All Hallows-the-Great was demolished in 1895. The advowson of St. Michael, Paternoster, is in the gift of the See of Canterbury.

Three churches have probably been erected on the site. The first was demolished about 1400 to make room for a larger church, erected at the expense of Sir Richard Whittington, who, born in 1350, was four times Lord Mayor of London in 1396, 1397, 1406, and 1419. Besides rebuilding St. Michael's, he founded a college for priests dedicated to the Holy Spirit and St. Mary. The college was swept away in Henry VIII.'s reign, its library appropriated by the Duke of Somerset, and its site acquired by the Skinners' Company. The almshouses were preserved, and the foundation is now administered by the Mercers' Company.

The present church was completed in 1694 by Edward Stone, master mason, to Wren, working under his direction. The steeple was not added until 1713. The interior is a simple parallelogram in form with a coved ceiling. The church contains a good pulpit and other woodwork, but nothing of exceptional interest. Some of the woodwork of All Hallows-the-Great is reused in the chancel. Externally the most interesting feature is the steeple, formed of three circular stages, the lower a ring of eight columns, with the entablature broken



round each, and the spaces between filled with two tiers of windows, the middle a circular drum with arched openings and the upper tier a smaller circular feature surmounted by a vane. As at St. James, Garlickhythe, the balustrade round the tower is filled in with pierced stonework. The steeple, though undeniably graceful, is a little wanting in emphasis and character when compared with Wren's more masculine compositions.

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BUILDING CONTRACTS.

The annual meeting of the Glasgow and West of Scotland Master Plumbers' Association was held on the 24th ult. in the Christian Institute, Bothwell-street, Glasgow. The report by the directors was submitted, and stated that meetings had taken place during the year with other building trades in Scotland and with architects and surveyors, under the chairmanship of Sir George Askwith, Chief Industrial Commissioner for Labour, with the view of adjusting model conditions of contract for building in Scotland. These had been framed, and were now in operation, and the feeling was expressed that various matters relating to building contracts would, by the conditions of contract, be put on a more equitable and satisfactory basis for all concerned. A mode of measurement for plumber work to be operative throughout Scotland was in course of preparation.

THE CARPENTERS' HALL LECTURES:

THE ENGLISH ROOF.

The fourth spring art lecture arranged by the Carpenters' Company was given in the Hall of the Company on the 23rd ult. by Mr. Arthur Keen, F.R.I.B.A., whose subject was "The English Roof." In the course of his remarks the lecturer said:—

"English people are nothing if not modest and unassuming, but we probably do ourselves an injustice when we admit, as we are prone to do, that we are not an artistic people. As a matter of fact we have produced some of the finest painters that the world has known; we have an especially English art, and a very beautiful one, in water-colour painting. Architecture has flourished here exceedingly. Our great Gothic churches have a beauty that the Continental ones cannot rival; our great Renaissance buildings, such as St. Paul's and Greenwich Hospital, hold their own against all competitors, and in the craft that the Carpenters' Company had under its rule for so many generations we have an art that is in a very particular way an English one, and one in which the English skill has found few worthy competitors. We think of our ships as having ever been mighty in battle, and they have also been marvels of constructive skill and intrinsic beauty; our timber buildings, sturdy and strong after centuries of wear and weather, are intens beautiful. Where on the Continent of Euro can such things as the Guildhall at Lavenha Ford's Hospital at Coventry, or Great Tangl Manor in Surrey be found? Our joinery wo in the great country houses, in the halls of Trade Guilds, in the organ-cases and fitti of the old churches is quite wonderful a intensely national in character; and the tim roofs of our mediæval churches, of the Halls Westminster and Hampton Court, Eltha Exeter, York, and many another place unique, so national, and withal so full power and beauty, possess such a claim on notice that no apology is due to you expatiating on them even in this hall, wh they have often been dealt with before.

The roof has been the governing factor the arrangement and contrivance of our bui ings, and just as in the East the buildings contrived to support and buttress the do and its surrounding vaults, so in the No it is the roof that limits our architecture a disposes our churches in long narrow na and aisles and transepts that can be cove by a construction formed of timber, which only found in limited lengths. In fact, it the most important consideration in a pl and I suggest to people who like maki sketch plans for the guidance of their arc tects that they will never make a plan th is of any service until they have master some of the facts about roofing. The farms and cottages, the great manor hou that are among the most precious possessi of this land owe half their beauty to th simple straightforward roofing. The long m lines and dignified gables and the great chi neys upstanding at regular intervals gro themselves into beautiful arrangements, a offer a sky-line that is unrivalled in any ot kind of buildings.

The simplest possible form of roof is mere lean-to, just a sloping beam laid fr a high wall to a low one, and it might almost dismissed from consideration, only it is roof that is universally used, and often recei very skilful design and workmanship.

Used in churches it enables the interior be really well lighted by means of clerest windows. What is done in most churches secure good light is to raise walls on the arch between the nave and aisles, with windo in them, and to roof the aisles with lean roofs at a lower level. These lean-to roofs generally very flat, so that the wall contain the windows may not be too high. A wall arches is not a very stable thing, and the lo it is the better for its strength and securi and, of course, the cheaper. At the same ti if the aisle roof is a flat one the side walls be of a good height, and thereby the dign of the church is much enhanced and the a windows made larger than they would be i low wall. Sometimes these roofs are of lean form, and sometimes they are flat roofs slop both ways. Both these forms occur Lavenham in Suffolk.

Most of the old roofs are of very mass construction; often there may be quite tw as much material in them as a scientific c penter might think necessary. So obviou is this the case that in most instances the carpenters laid their rafters flat instead on edge after the modern fashion. Th realised that in the course of the centu of a building's life all kinds of things m happen. Alterations may have to be ma water may get in and rot off half the substa of a beam, a fire may occur, thatch may replaced by tiles or lead. If there is plenty material, the decayed wood can be cut c and a perfectly sound repair can easily made, and in any case a building with a la reserve of strength will suffer neglect for long period without collapsing. In old w it is with the roofs as it is with the wa which are so thick that they will remain sta ing long after reaching the point at which thin modern wall built of better mate would fall. And what value there is in am material from the point of view of appearan No amount of subtle and laborious de will compensate for the want of obvious solid and good quality in a building. It is alm the only thing that will satisfy us by its One of the best-looking roofs I ever saw orth Walsham in Norfolk, and there was moulding on it anywhere, but the timbers were enormous. It is a very interesting ple, because it is so contrived that arcades ı run from end to end of the church ut any cross walls are buttressed, and d securely by the nave and aisle roofs being cted. The tie beams run right through t mework of the arcading, and are framed right wall-posts on both sides, so that the are held as in a vice, and they as a matter ct remained quite upright for nearly 600 . It is when we have satisfied every rement of structural completeness that work may be made ornamental with ng, moulding, and colour; and it is then we see how finely these big timbers will themselves to decoration. They will such rich, full mouldings, such broad e of carving, and the colour decoration was often lavished on them is worthy of ure all to itself.

·identally, I may point out that the led work of the old roofs is always ght out of the solid wood. Carved and d crestings are cut in separate pieces ixed on, always in an honest and obvious but the mouldings are worked on the solid. are ornamented construction, not conted ornament.

e old carpenters loved the sweet simplicity ff cross beams of enormous size upholding oof and preventing any outward pressure. being a favourite covering material, lows that many roofs are practically flat ramed like a timber floor, with big cross s, smaller longitudinal ones called purlins, still smaller filling timbers called rafters. have, of course, a slight slope to the two they are richly moulded, panelled, ribbed, arved, and often have elaborately-carved ets to support the main beams.

e constructional problems connected with are mainly two in number—to prevent ırd thrust, and to prevent the rafters bending; and it is in dealing with these roblems that most of the scope for decorareatment is found.

ne of these nearly flat roofs have the beams cut out of bent trees, so as to the slope of the roof, but it is more usual t the beam deeper in the centre than at nds, as in an example at Astbury in ire.

re is no getting away from the fact that ost old roofs there was a good deal of ce placed on the resistance offered by hick heavy walls, but at the same time effort was made to reduce the outward ıre on them caused by the sloping roof rs. If you make a small wooden model, enting two rafters leaning against each you find that a slight pressure on the top s the supports at the bottom outwards. f you form a small triangle at the base of after by putting down a short horizontal and a short upright one, both of them d to the rafter, this movement is materially ed. This is what the old builders did. put a short timber across the wall, which ft. or more thick, framed the foot of the to the outer end of it, and then from the end of it they put a short upright piece ramed to the rafter. At the same time put cross-pieces higher up from rafter to . and other pieces across the angles, all d together, and this gave them what we trussed rafter roof—that is to say, a roof ich each pair of rafters is trussed or framed ıer so as to be self-supporting. A roof his is broad and satisfying in effect, and y reason of the constant repetition of its parts. It is a type of roof that was continually in the mid-Gothic period— e fourteenth century and onward—and endless variation in the arrangement roportions of its parts. Generally the of the roof is a steep one, so as to reduce ıch as possible the thrust on the walls. West Country the inner struts and crosswere often curved and much continuous, to give the roof the appearance of a vault. ny cases, and again especially in the West, nderside of these roofs, whether arched gular, was boarded to form a ceiling d into panels by moulded ribs with carved at the corners.

What we may call an open timber ceiling in a mediæval building, and an example that is interesting to Londoners, is that at Crosby Hall, pulled down in 1908 and re-erected at Chelsea. There were great crossed scissor beams to tie in the roof, and this ceiling was a practically independent construction below them. One imagines the ornamental pendants as being the lower ends of constructional posts, which is not the case, and in this respect we can only feel that the general design is unsatisfactory, although the work is so rich and beautiful. Sir John Crosby built this Hall, and as he acquired the property in Bishopsgate in 1466, and died in 1475, the date of the ceiling is fixed within a year or two.

Our English carpenter was a man of remarkable initiative, and he was for ever experimenting with new forms and methods. He realised early that the form of the stone arch might be adopted in woodwork, and he did adopt it freely and fearlessly, taking care to throw the ultimate thrust as low down as possible, because the walls that carried his work were high and were not strengthened much by buttresses. The arched form is not merely very pleasing in itself, but the ribs of timber that form the arch tie and bind into one solid construction the principal rafter, the wall pieces, and the collar beam, if there is one, near the apex of the roof, so that they are as if cut out of one piece of wood unbending and without thrust; but, of course, as I have pointed out before, in actual practice there is inevitably some movement due to shrinkage and twisting of the timber and so forth. Still, so sound and practical are they that they seem actually to hold and steady the high clerestory walls, full of large windows, and balanced on high arcades, so that they stand safe and well after five centuries of wear and strain.

A modern timber roof truss depends entirely on two great factors: one, that timber cannot stretch, and the other that used in short lengths it cannot bend, and it is about as perfect as anything in this imperfect world can be. The modern method was not used, as far as I know, in mediæval England, although in France it was adopted freely in forming the roofs of the cathedrals, and the wonderful timber flèches that adorn the crossing of some of the French cathedrals and tower up 120 ft. or more clear above the roof were carried by timber trusses formed on the principle that we now employ. The flèche at Amiens, covered with lead and weighing an enormous amount, is fully 150 ft. high, and stands above a roof that is 160 ft. high off the floor, and there it has stood for four centuries. But the English carpenters seem to have disliked the appearance of tie beams under high roofs, and to have striven always for the appearance of height and dignity that their arched constructions secured.

One of the greatest inventions of the mediæval carpenter—one of his most skilful contrivances —was the hammer-beam roof. In the early trussed rafter roofs there was, as I have pointed out, a triangle at the foot of the rafter which resisted outward pressure or spreading of the roof. In a hammer-beam roof this triangle becomes much larger—it projects boldly out from the wall, and is upheld by a slanting prop or brace jutting out from a wall-post below. The triangle thus supported becomes immovable, and the roof therefore cannot push the walls outwards. This method, once established, was recognised as a triumphant success, and it was used in the most fearless manner with all kinds of developments and modifications. The splendid possibilities of decorative treatment that it offered were seen at once and full advantage was taken of them, while the possibilities of interchange and variety among the many parts that composed the truss gave the opportunity for ever fresh treatment. If you go through the Norfolk churches you realise that the same carpenter must have worked in many of them and yet the roofs are never alike.

The finest construction of this class that we have, and altogether the most wonderful timber roof ever made, is the one at Westminster Hall, and a strange thing about it is that it was the first roof of its sort to be made—not merely the first with the great arched rib running up through the whole construction, but the first hammer-beam roof. The work of re-roofing Westminster Hall was begun in 1395, the materials having been got together during two years previously. John Godmeston, clerk, was put in charge of it, and Hugh Herland, carpenter, was appointed controller of the work. An interesting commentary on the social conditions of the time is to be noted in the fact that Godmeston was authorised to take the necessary workmen that he required—masons, carpenters, and labourers—wherever found, and to arrest and imprison those who resisted. The mason was also to "arrest" carmen, horses and carts, and ships and mariners for conveying the stone. The same system is shown by the fabric rolls to have been in operation in the building of Westminster Abbey in Henry III.'s reign, and it hardly bears out the theory of enthusiastic Churchmen who believe that the great works of mediæval times were built by the monks themselves out of sheer devotion and love, and without remuneration, although they have never told us how the monks learned their craft. Westminster Hall was built in the reign of William Rufus in 1097, and the original roof was in two or more spans, probably three. The walls were raised 2 ft. in Richard II.'s reign in preparation for the present roof. There are contemporary documents that give particulars of the purchase and carriage of materials, and all the arrangements for executing the work. The span between the walls is 69 ft., and the principals are 20 ft. from centre to centre. The complexity of the construction, combined with the huge size of the oak timbers used in it, makes the roof an amazing production. For instance, the great collar beam of each truss is a huge log of oak 38 ft. long and more than 2 ft. deep, and it had to be got into position 66 ft. above the floor. Everything else is on a similarly huge scale, and one stands astonished at the courage and resource shown by these old carpenters who could not only conceive such a thing, but who carried it out with such accuracy and precision of workmanship that they might almost have been handling the stuff on a bench in a workshop. The mere constructive and executive problem was stupendous, but these men looked far beyond this side of their task; they were artists, and they made their work so beautiful that one does not know which to admire more, its constructional sufficiency or the beauty of its appearance."

BOOKS.

Lesnes Abbey. By ALFRED W. CLAPHAM, F.S.A. (London: Cassio Press. 10s. 6d. net.)

THIS book consists of a carefully-compiled history, ecclesiastical and architectural, of the comparatively little known Abbey of Lesnes, and is illustrated by an excellent collection of photographs and a general plan. As a work of purely architectural interest it cannot be said to have a very strong claim, but from the antiquarian standpoint, and as a record of the results of the excavations and historical investigations, the book is a notable contribution to the literature. The plan is especially interesting and valuable, as an example of the conventual establishments of the Augustinian Order in this country. Apparently Reformation zeal has left but little beyond the foundations, although, as the illustrations show, the excavations have revealed some interesting fragments of ornament and design, one of the most important being a fine fourteenth-century effigy, which is now to be seen in the Victoria and Albert Museum.

From its foundation by Richard de Lucy in 1178, through the centuries to the Dissolution, the Abbey's history has been traced with every care, but there is no attempt at a description or account of the actual work of discovery. Possibly the author considered that such details hardly came within the scope of a book of this kind, but many will regret that a history of the undertaking has not been added, both as affording useful information on the conduct of archæological exploration and as adding a touch of the romance of discovery The volume will undoubtedly be appreciated by the antiquarian student, and is valuable for reference.

Lockwood's Builders', Contractors', and Engineers' Price-Book for 1916. Edited by R. STEPHEN AYLING, F.R.I.B.A., Member R.San.Inst. (London: Crosby Lockwood & Son, 7, Stationers' Hall-court, Ludgate-hill. 1916.)

THIS work, which obtained an important position in the world of price-books under the late Mr. Francis T. W. Miller, whose genial presence will be missed by all those who came into contact with him, appears for the first time under the editorship of Mr. R. Stephen Ayling, and we are pleased to observe that he is apparently determined that the work shall not stand still while under his control. The production of such a work—even if it is only a question of revision—is not a question of days or even weeks, but must obviously run into months, therefore the prices given are those which obtained generally in October last, and as such there is little cause for complaint, although at the present time we are afraid that many would be found inadequate. A careful examination of the prices shows that a most conscientious attempt has been made to revise them as far as possible, and to keep up the high reputation which this book has obtained. A very interesting table showing a comparison of prices of building materials from 1911 onwards is given, and another valuable addition is a series of diagrams illustrating the requirements of the London Building Act. Altogether the new editor is to be congratulated upon his work, and his first appearance augurs well for the future.

The Civil Engineers' Cost Book. By Lieut.-Colonel T. E. COLEMAN (Staff for Royal Engineer Services). Second edition. Revised and enlarged. (London: E. & F. N. Spon, Ltd., 57, Haymarket. 1916.)

THIS work is on the same lines as the author's work on "Approximate Estimates for Building Works," and is full of the most useful information. It will be found of great service in preparing approximate estimates for engineering works, for the prices, although "lumped" and some latitude in the figures given, there being sometimes a difference of 50 per cent. or more between the minimum and maximum, which, however, is inevitable in a work of this kind. Many of the prices are based upon the actual cost of works, of which the author has managed to get together a marvellous collection. To our mind this collection would have been infinitely more useful if the dates had been given when the various works were executed, and some we must confess can be of little practical value—*e.g.*, the prices per square of the roofs to Cannon-street S.E.R. Station and the St. Pancras (Midland) Station are interesting as records, but can hardly be applicable at the present time. The author, by the way, does not make it clear whether the "square" refers to the floor area covered or the area of the covering. In the case of the St. Pancras roof there are two or three dimensions to which the measurement might apply. There is a fairly complete collection of prices of reinforced concrete work with numerous examples of executed works, but we would point out two obvious errors on page 225, where the cost of the Calcutta tank is given at 1¼d. per gallon capacity. This should, we think, be 2¼d., and in the case of the Ugborough tank, which should be £12 10s. per 1,000 gallons instead of £17 18s. We are not very clear as to the items of hopper bins on page 218, where prices are given as "5½d. to 7d. per foot cube," and then immediately following "8d. to 1s. per foot cube of storage capacity." There is a somewhat similar item on the following page. If the 8d. to 1s. is for "storage capacity," to what does the 5½d. to 7d. refer?

We have dealt with this work at some length because, despite our criticism, as a whole it is a most creditable production, but it could be made much more useful, in our opinion, if the dates of the examples were given.

CORRESPONDENCE.

Wren's Churches.

SIR,—I am heartily in accord with Mr. Lindley Latham's excellent suggestion with regard to the inauguration of a permanent exhibition of Wren's model of his first design for St. Paul's Cathedral, accompanied by a collection of well-prepared models of the destroyed City churches.

Although, as Mr. Latham points out, it may not be found possible in these troublous times to give immediate effect to the proposal, yet, as the collection of models could scarcely fail to strengthen the slowly-growing interest of the general public in the architectural history of London, the idea appears to me to be one of a nature that ought not to be allowed to fall into oblivion. A. W. S. CROSS.

Contracts.

SIR,—One hears a good deal of the difficulties of contractors in carrying out contracts entered into previous to the war, and one is struck by the unreasonableness of many private individuals and also public institutions in recognising these difficulties, and their refusal to enter into any negotiation with the contractor, who finds himself involved very often in serious losses owing to circumstances brought about by the war.

But what strikes one as similarly unreasonable, and really unnecessary in these difficult times when supplies and prices fluctuate almost daily, is to see the usual forms of tender still being advertised by many councils and corporations for supplies to cover for no less than twelve months' requirements.

This is the usual period with these contracts in ordinary times, and, although it must be apparent that in making period contracts at the present time a good deal must be left to pure chance, there does not seem to be any general inclination to make things easier by reducing the periods to say three months or even six.

This apparent indifference to existing conditions is very prevalent, and difficulties which could be obviated are still allowed to exist. G. C. BOWERS.

Should Art Be Artless?

SIR,—Mr. J. Alex. Pirie remarks on Mr. Bond's quotation in the R.I.B.A. *Journal* about the men of the Middle Ages performing their work beautifully, that "each architect knew nothing and cared for nothing but the work of his own day, and this narrow-mindedness was his artistic salvation. We moderns know too much."

I quite agree with Mr. Pirie so far, and think this is a matter that requires the most careful investigation with fair and reasonable broad-mindedness, yet there seems some truth in Mr. Bond's remarks, for at page 136 of the last issue of this valuable paper we read, "Those who are employed in any capacity in connection with the decorative scheme of Westminster Cathedral have much to contend with because, in the nature of things, their task is a most difficult one in the present age. The number of architects who can design a building of outstanding architectural merit are few."

Knowledge is good, and we cannot get too much, but the fruit it bears is always open to criticism.

JOHN W. GRANT, A.M.C.Inst.(Lond.).
Greenock.

Westminster Cathedral.

SIR,—Referring to the "Note" in your issue of the 18th ult., headed "Criticism or Abuse?" it seems to have escaped notice that the initials attached to the *Observer* letter defending its criticism of St. Andrew's Chapel are identical with those of Mr. Konody, the critic himself. The inference seems fairly obvious, and, whatever objection may be raised to this gentleman's views in a given case, one can scarcely deny his competence as an art critic or his knowledge of colour merits. If, as you point out, the architects capable of directing the design and execution of a colour scheme are very few, is not that a reason the more for allowing weight to the views of the competent outsider? not, where is the voice that can claim hearing?

There is this much at least, it seems to me, to said in regard to this discussion, that the att has been much more definite than the defen which has consisted very much in object to objection. As to the particular le mentioned, the bathroom simile, if bo strikes one nevertheless as apt, for really entering St. Andrew's Chapel one has a sen tion akin to that of being up to the neck cold water. Is there, I would ask, any congru between these chilly marbles and the glow gold and colour above them? Is it right arrange the weight at the top and the lig ness below? Is it according to precedent the style? Are the marbles harmoniou matched among themselves? Again, to t the chapel in relation to its surroundin Does it accord with the treatment of the nei bouring chapel and its pendant (the m likely from their date to embody Mr. Bentle own ideas), where in both cases the mar dados are deep in tone and weighty in eff and the entire colour scheme is harmoniou rich, mellow, and solemn? And, if not, it be claimed that Mr. Bentley's guidanc being followed in any true sense by successors?

These are plain questions, and I add them, as suggested, to the *Builder* rather t to the *Observer*, though I cannot see how a one is to blame for writing to the organ wh initiated the discussion, and whose colu are equally open to friend and foe, exp and amateur. It would be easy to enla one's inquiries so as to include the m figure in relief on the flat inlay of marble, that would be exceeding the scope of original criticism. RHO

BOOK RECEIVED.

LAXTON'S BUILDERS' PRICE-BOOK for 19 (London: Kelly's Directories, Ltd. 4s.)

OBITUARY.

Mr. F. W. Englefield.

Mr. F. W. Englefield, Clerk to the Paint Company, died suddenly in London Friday last. He had been associated with Guild for many years, succeeding sev members of his family. He was also Secret of the Incorporated Institute of Brit Decorators.

LIVERPOOL AUTUMN EXHIBITION.

Liverpool Museums and Art Committee h decided by seven votes to four to hold autumn exhibition until a year after the w

THE ARTIZANS', LABOURERS', AND GENERA DWELLINGS COMPANY, LTD.

The directors of the Artizans', Laboure and General Dwellings Company, Ltd., in t forty-ninth annual Report state that furt capital is not now being issued by the compa The total capital issued and paid up sta at £2,939,230. The gross revenue for year amounted to £233,610 1s., being £310 more than in 1914. The net revenue for year amounted to £119,055 1s. 11d., a payment of the dividends on the prefere capital at the rate of 4½ per cent. per annu less income-tax, and an interim dividend 4 per cent. per annum, less income-tax, on ordinary capital, and after carrying £12,000 the repairs fund, the balance as shown in balance sheet at December 31, 1915, amoun to £59,249 18s. 2d. Out of this balance preference dividends for the second six mon of 1915, amounting to £22,246 7s. 4d., w paid on January 1, 1916, leaving £37,003 10s. 1 The directors recommend a dividend at rate of 4 per cent. per annum, less inco tax, on the ordinary capital for the sec six months of 1915, making a dividend 4 per cent., less income-tax, for the year.

ENERAL NEWS.

Professional Announcements.

r. W. Courtney Fagg, quantity surveyor, removed from 63, Finsbury to Wardrobe nbers, 146A, Queen Victoria-street, E.C. telephone number is Central 12127.

ie business of Sir Arthur Blomfield & Sons, erto carried on by Capt. Charles J. nfield and Mr. Arthur C. Blomfield at Iontagu-place, Baker-street, W., has been sferred to the Eyre Estate Office, 125, :-road, N.W. Capt. Blomfield can also ommunicated with at the headquarters of Artists' Rifles, Duke's-road, Euston-road, . (telephone, Central 10814); and Mr. ur Blomfield, as before, at the Architect's e, Bank of England, E.C.

The Architectural Association.

ie address of the Architectural Associa- is now No. 37, Great Smith-street, tminster, S.W.

The Late Mr. H. L. Florence.

ie Architectural Association was repre- d at the funeral of the late Mr. H. L. ence by Mr. H. Austen Hall (President) Mr. F. R. Yerbury (Secretary). The late Florence was President of the Architectural ciation during session 1878–1879.

The London Society.

ie fourth annual general meeting of this ety will be held in the Hall of the Royal ety of Arts, 18, John-street, Adelphi, ., on Thursday, March 9, at 5.30 p.m. At meeting the annual Report and balance t of the Society will be submitted. Lord nouth, the President, will take the chair, Sir Aston Webb and others will speak. ddition to the adoption of the Report and nce sheet, members will be asked to elect the ncil for the ensuing year.

The Institution of Civil Engineers.

the meeting of this Institution on Tuesday, ch 7. an address on "Industrial Develop- :" will be delivered by Mr. Harold Cox. nviting Mr. Cox to address the Institution his subject, the Council have considered the present time calls for some earnest ation on the part of engineers to the economic s which, after the war, must influence oundly the future of engineering, as well he industrial and commercial enterprises h are vital to its progress both in this try and abroad. The meeting will be at p.m.

The Drainage of Cairo.

. Charles Carkeet James, M.Inst.C.E., ie last meeting of the Institution of Civil neers, read a paper on "The Main Drainage 'airo." The paper commenced with the ry of the steps taken by the Egyptian rnment for the drainage of Cairo from to 1906, and then described the scheme ubsequently designed and carried out by author, and officially inaugurated by the Minister of Public Works on March 22 year. The purification works at Gebel-el- r are designed to treat 11 million gallons day through six hydrolytic tanks and eight inuous filter-beds with storage-tanks for ng up the night-flow.

Egyptian Monumental Art.

ofessor G. Baldwin Brown recently lectured The Monumental Art of Ancient Egypt" meeting of the Glasgow Branch of the ptian Research Students' Association at gow University. He said that the struc- of the old Empire were in the best sense imental through their severity of treatment uch as by their actual prodigious size. On other hand, the temples of the new Empire huge in bulk, but failed to produce the æsthetic impression. Nature had lent ie incomparable works of the old Empire wn majesty, while on the other side human n had permeated them in every part and s complete mastery of them had stamped with the impress of style.

Belgium After the War.

It is stated by the Central News correspondent at St. Paul, Minn., that Mr. J. J. Hill has been invited to take the direction of the work of reconstructing the Belgian railways and buildings after the cessation of hostilities. Mr. Hill has informed King Albert that he is willing to accept the task.

"The Year's Art."

The "Year's Art" for 1916, compiled by Mr. A. C. R. Carter, has just been issued. As an epitome of matters relating to the arts of painting, sculpture, engraving, and architecture and to schools of design which have occurred during the past year, together with information respecting the events of the year 1916, it is of considerable interest and value, and leaves little or nothing to be desired. The editor records the chief events of the year. The work, the thirty-seventh annual issue, includes several full-page illustrations, and is published by Messrs. Hutchinson & Co.

Society of Antiquaries.

A meeting of the Society of Antiquaries was held at Burlington House recently, Sir Hercules Read presiding. A gilded bronze boss of Irish work, *circa* 750, which was found at Steeple Bumpstead, Essex, was exhibited by permission of the vicar, the Rev. W. F. D. de Langdale. Mr. Reginald Smith, in a series of notes illustrated by lantern slides, said that the boss, while not a masterpiece, belonged to that period of Irish art, the eighth century, when masterpieces were common. Sir W. St. John Hope then described the seals of the Abbey of Waltham Holy Cross; and a number of panels made up of broken pieces of mediæval stained glass were exhibited. Mr. Eden said that the fragments ranged from the thirteenth to the nineteenth centuries, and among the most complete pieces were to be seen the arms of Bishop Grandison, of Exeter, and of the de Lacy family.

Cost of Road Improvements.

The Road Board have, under date of February 25, issued the following circular to county authorities:—"I am directed by the Road Board to inform you that they have been in communication with the Treasury as to the policy to be observed by the Road Board in regard to applications for advances towards the cost of road crust improvements to be carried out during the financial year 1916–17, and it has been agreed that new grants or loans, to an aggregate sum not exceeding £200,000, may be made out of the surplus at the credit of the Road Improvement Fund. The grants and loans will be confined mainly to expenditure on tar treatment of important roads, either in the shape of surface dressing or pitch grouting or tar macadam. It has been brought to the notice of the Board by the Ministry of Munitions that certain products obtained from the distillation of crude tar are of great importance in connection with the supply of high explosives, and on that account it is desirable to encourage the use of refined tar by highway authorities. Apart from this, however, the Board consider that at the present time, when it is desirable to economise expenditure as much as possible consistently with adequate maintenance, a surface dressing of tar is generally the most effective and cheapest method of preventing disintegration and thereby prolonging the effective life of a road crust, provided that the surface is in sufficiently good condition to justify the application of the tar dressing. The Board will require to be satisfied on the last-mentioned point in the case of each application for a grant. No grants will be made for the use of crude tar. Applications for grants or loans should be sent forward at an early date, and should be accompanied by—(1) Particulars relating to the proposed improvement; (2) a summary of the highway estimates of the Council for 1916–17; and (3) a statement showing the total expenditure on roads and bridges in 1914–15 and 1916–17 (estimated) in continuation of the information supplied to the Board on yellow form 42, 'Information relating to the expenditure by county councils on roads and bridges.'"

Collapse of Sidestrand Tower.

The old church tower, on the Sidestrand cliffs, Norfolk, collapsed on Saturday last in consequence of the recent severe weather. It had been on the edge of the cliff for years. For the most part the masonry is dashed to pieces on the shelving cliff below, but here and there blocks are to be seen.

The Royal Institute of British Architects.

At Monday's meeting of the R.I.B.A., Mr. Ernest Newton, A.R.A., the President, being in the chair, the nomination of Sir R. Rowand Anderson, LL.D., as the Royal Gold Medallist for the year, was proposed and carried by acclamation. There was no other business except the usual formal announcements, and the meeting terminated in less than ten minutes.

Wood and Stone Imports.

The President of the Board of Trade has appointed the following Committee to grant licences in special circumstances for the importation of furniture woods, hard woods, and veneers, and of stones and slates, the importation of which, except by licence, was recently prohibited by Proclamation:—Mr. J. H. Bovill (Chairman), Mr. George Burt, J.P., and Colonel G. T. V. Cobbett. Mr. H. J. Phillips, of the Board of Trade, will be Secretary to the Committee, and all communications relating to the importation of the goods mentioned should be addressed to him at Gwydyr House, Whitehall, London, S.W.

Charing Cross Bridge.

The Bill of the South-Eastern and London, Chatham, and Dover Railway Companies for power to strengthen Charing Cross Bridge has been passed by the examiners of the House of Lords for Second Reading and Committee stages. The Bill will be opposed in Committee by the London County Council, the Port of London Authority, the Gas Light and Coke Company, and the lightermen and barge owners of the Port of London. The engineer's estimate of the cost of the work is as follows:—Strengthening of bridge, £150,000; contingencies—10 per cent.—£15,000; easements, £2,000; a total of £167,000.

The R.I.B.A. Annual Elections.

The R.I.B.A. *Journal* which appears on March 4 will contain the following announcement:—"A special general meeting will be held on Monday, March 13, 1916, at 4.30 p.m., to consider a proposal which will be submitted by the Council in order to avoid holding an election for the Council and Standing Committees in 1916 during the absence of several hundreds of members serving with the Forces. The following resolution will be moved on behalf of the Council:—'That in accordance with the provisions of Clause 33 of the Charter application be made to the Privy Council to sanction the suspension of the by-laws governing the annual election of the Council, the Standing Committees, and the Hon. Auditors, so that the Council, the Standing Committees, and the Hon. Auditors elected in June, 1915, shall remain in office until June 30, 1917.'"

The East End Dwellings Company.

In the Report and accounts of the East End Dwellings Company, Ltd., for the year 1915 it is stated that, exclusive of the old property in Victoria Park-square, the rents attributable to 1915 were £40,182 13s. 7d., as compared with £39,820 15s. for 1914, and the lettings have again been very satisfactory. Including £1,078 13s. 1d. brought forward from 1914, the profit and loss account shows a credit balance of £15,731 18s. 10d. Out of this sum £4,000 has been carried to reserve, which now amounts to £76,000, and interim dividends for the first half of 1915, at the rate of [illegible] per cent. per annum (less tax) on the Preference shares, and 5 per cent. per annum, free of income-tax, on the Ordinary shares, have been paid. The directors now recommend a similar distribution for the half-year ending December 31, 1915. After providing for these dividends, and also for directors' and auditor's fees, a balance of £1,023 19s. 4d. will remain to be carried forward.

Leading Contents.

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ILLUSTRATIONS.

New Throne, Bristol Cathedral.

THE new bishop's throne, which we illustrate, has been recently completed. It is of English oak throughout, and stands against the pier between the second and third bays of the choir immediately eastward of the stalls on the south side. In front of the throne is a seat for the chaplain. In the spandrels of the panels below the bishop's bookboard are the date and initials of the bishop. Over the bishop's seat is an inscription, "Sedes Episcopatus Bristolliensis"; above in the centre panel are the arms of the see surmounted by a mitre. Shields have been introduced in the tracery of the ends of the bishop's seat, one charged with the arms of the see impaling those of the bishop, the other with the arms of the Province of Canterbury. The canopy, in the form of a "tester," is supported by six groups of pinnacles and buttresses, and is finished with an elaborate cornice and cresting. The detail throughout has been designed to harmonise with the ancient work in the choir stalls. It has been executed by Mr. W. H. Saunders, of Cirencester, from the designs of the architect, Mr. Roland Paul, F.S.A.

University of London, King's College for Women.

WE give some clever impressionistic sketches by Mr. Charles Holden. Messrs. Adams & Holden are the architects of the building, which we recently illustrated.

Wren's Churches.

WE give reproductions of two plates of St. Michael, College-hill, and St. James, Garlickhythe, from "The Churches of Sir Christopher Wren," by J. Clayton, published by Messrs. Longmans, Green, Brown, & Longmans, which we give by the courtesy of Messrs. Longmans, Green, & Co. Further notes on the two churches will be found on page 175, and we are giving the plan of St. James, Garlickhythe, in our next issue.

Altar and Reredos, Reading, U.S.A., and Salem Reformed Church, Allentown (Pa.), U.S.A.

THESE works have recently been carried out in America from the designs of Mr. John W. English.

Some Measured Drawings.

THESE drawings of rood screen, Hexham Abbey, the Abbot's door, St. Albans, and pulpit in St. Michael's Church, St. Albans, were measured and drawn by Mr. John W. English.

MEETINGS.

Monday, March 6.

Surveyors' Institution.—Mr. G. Turville Brown (Fellow) on "The Management of Estates in Mineral Districts and Mineral Valuations." 5 p.m.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher on "Sir Christopher Wren and His City Churches." 4.30 p.m.

Tuesday, March 7.

Institution of Civil Engineers.—Mr. Harold Cox on "Industrial Development." 5.30 p.m.

Wednesday, March 8.

Northern Architectural Association.—Ordinary meeting. 4.30 p.m.

Carpenters' Company.—Mr. W. Robert Colton, A.R.A., on "The Effects of War on Art." 7.45 p.m.

Thursday, March 9.

The Royal Institution.—Professor L. W. King on "Recent Excavations in Mesopotamia." 3 p.m.

University Extension Lecture (at the British Museum).—Mr. Banister Fletcher on "Early Christian Churches in Rome." 4.30 p.m.

FIFTY YEARS AGO.

The East India Club, St. James's-Square.

THE East India United Service Club just entered into possession of its new cl house. The old building, No. 14, St. Jame square, had long been found too small for increasing numbers of the club, and members therefore decided to rebuild No. St. James's-square and add it to th former house, No. 14. Mr. Charles Lee their architect.

The East India United Service Club originally founded in 1848 to meet wants of the various services which coll tively administer the Indian Governme It has, however, generally lost its exclusiv Indian character, and has now on its r many officers belonging to the home forc The club numbers upwards of 1,700 membe of whom generally about 800 are in Englar The new building has been designed accommodate over 1,000 members. T works have been executed by Messrs. Geo Myers & Sons; and the furniture was suppl by Messrs. Holland & Sons. Mr. Alfr Howard acted as clerk of the works.

[*** From the *Builder* of March 1866.—Ed.]

University of London, King's College for Women: Hostel Entrance.

"An Impression," by Mr. Charles Holden, A.R.I.B.A.

LEGAL SECTION.

TES ON CURRENT CASES.

e Urban District Council *v.* Fidelity nd Deposit Company of Maryland : Contractor and Surety.

AKING into account the fact that in
many contracts for works of any
magnitude the employer protects him-
ainst default of the contractor in com-
the works or in not properly carrying
out by requiring the contractor to find
s to guarantee the employer against loss,
urprising how few cases come before the
in regard to such matters. In the case
above, however, which was recently tried
Mr. Justice Bailhache, and reported
16] 1 K. B. 25, some points of interest
nportance were the subject of litigation.
a contract entered into in 1912 the con-
r agreed with the Hoole Urban District
il to carry out certain sewerage works,
the terms of the contract the contractor
find good and substantial sureties for
e fulfilment by him of his contract. The
iants, the Fidelity and Deposit Company
ryland, gave to the plaintiffs a bond,
g even date with the contract, whereby
bound themselves in a sum of £500, the
ion of the bond being that the contractor
"well and truly perform, fulfil, and
ll and every the clauses, terms, conditions,
ipulations in the said recited contract."
id terms and stipulations did not include
xpress agreement by the contractor that
event of litigation arising between him
ne Council in connection with the per-
nce of the contract, and of his failing in
tigation and being ordered to pay the
he would pay them. The contractor
to carry out the work satisfactorily,
reason of his alleged neglect in the
of the sewer injury was done to certain
d water mains, and property belonging
d persons was damaged. He also failed
her to complete certain of the works
ted for. Disputes arose between the
tor and the District Council, and he
t an action against them, claiming that
of £603 was due to him under the con-
The Council admitted that a sum of
vas due to him, and they paid that
into court, but they denied that he was
l to any more. They also counter-
l for £329 damages for breach of his
t, in respect of the damage done to the
y of the third person whose claims the
had to satisfy, and in respect of the
t works which he failed to complete.
tion was referred to an arbitrator by
, and the arbitrator by his award made
year 1914 found that the contractor
titled to recover upon his claim the sum
2 so paid into court and no more, and
e Council were entitled to recover upon
nterclaim the £329 damages claimed.
cordingly entered judgment for the
for the balance of £177 and costs.
sts were taxed and allowed at £398.
m when added to the £177 damages
ed to £575, a sum which was in excess
amount secured by the bond. The
then brought this action against the
and Deposit Company of Maryland
heir bond, claiming the £500 thereby
The defendants did not dispute their
to pay to the plaintiff the £177
s, but denied their liability for the

the plaintiffs it was argued that the
overed all the conditions for the due
nt by the contractor of his contract, and
e defendants would pay everything
ch the contractor would be liable as
ural consequences of his breach, which
nclude the liability to pay costs reason-
curred in enforcing a claim against
r damages, which liability may be
d to have been in the contemplation
rties at the time they made the contract
bable result of the breach.

The defendants, on the other hand, contended that the condition of the bond being that the contractor should fulfil his contract, they were liable under the bond to pay costs only if the non-payment of the costs by the contractor was a breach of his contract. The contract was silent on the subject of costs, and they said that there was no implied undertaking to pay any costs that might be ordered against the contractor in any litigation arising out of the contract. The costs which the contractor was liable to pay were payable not under any agreement but under the arbitrator's order, and for a breach of that order the defendants were not liable under their bond.

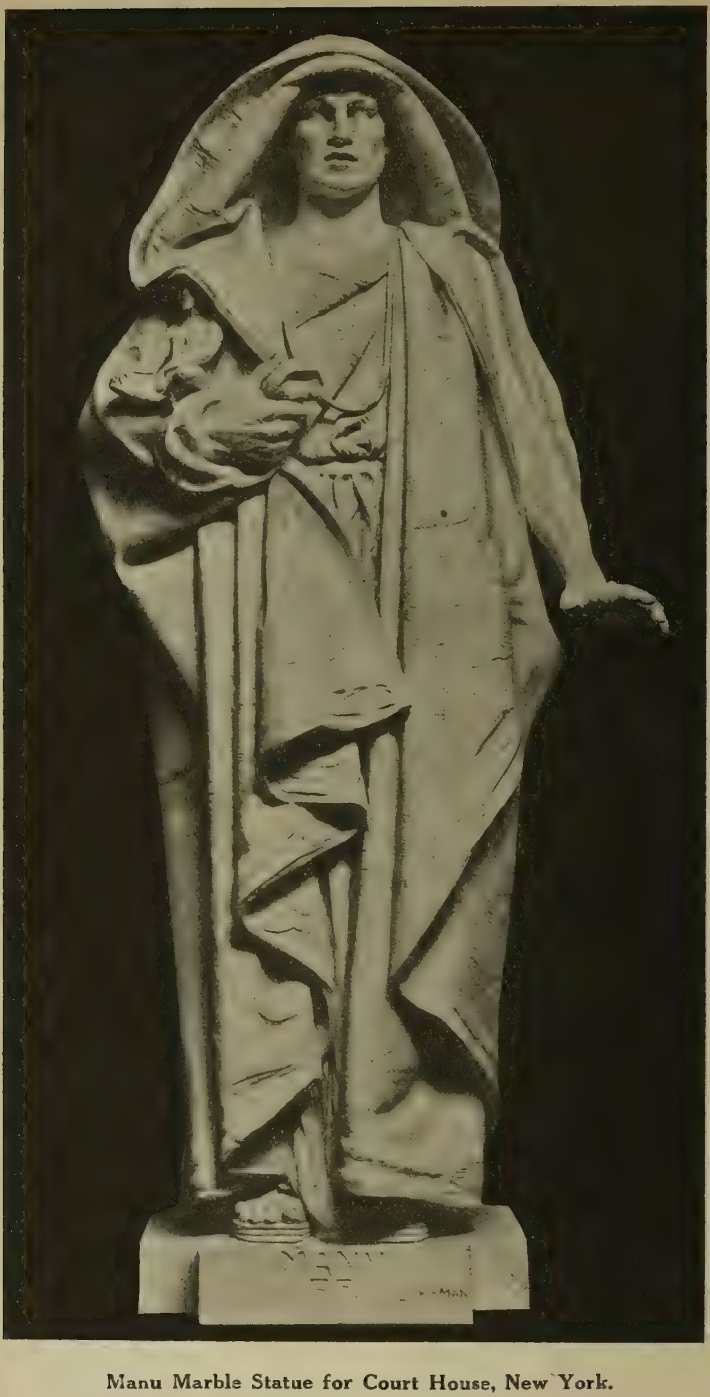
Mr. Justice Bailhache, in giving judgment for the defendants, said that the action arose upon a bond which was annexed to a contract for the execution of certain sewerage works in 1912. The bond was given by the defendants to the plaintiffs in the sum of £500, the condition of the bond being that the contractor should duly fulfil his contract with the plaintiffs, the contract being of even date with the bond. As the contract approached completion disputes arose, as not infrequently happens in such circumstances, between the contractor and the District Council as to whether the contract had been duly fulfilled or not. The contractor brought an action against the Council, in which he claimed a sum of £603. The Council admitted liability for £152 and disputed liability for the balance. They also counterclaimed against the contractor in respect of a certain liability to third parties, and in respect of damages for works uncompleted. Shortly after the commencement of the action it was apparent that it was a case which had better be dealt with by arbitration than by action, and by consent the whole matter was referred to an arbitrator. The result of the arbitration was that the contractor recovered no more of his claim than the £152 which the Council had admitted, and the Council recovered on their counterclaim £329, so that on the balance of those figures there was due from the contractor to the Council the sum of £177. The arbitrator also awarded to the Council their costs of the action and the arbitration, which costs were taxed at £398. That sum when added to £177 damages made a sum of £575, which exceeded the amount of the bond. The Council accordingly claimed that they were entitled to recover from the defendants the whole amount of the bond in respect of the damages and costs. The defendants admit their liability for the £177 damages, but deny their liability for the costs. The Council say that it is in the natural order of things that when a contract of this description comes to be finished there should be disputes between the contractor and the employer, and that upon such disputes arising it is a reasonable thing to submit them to arbitration, and they say that these costs were incurred as the result of a reasonable course of conduct which must have been in the contemplation of the parties when they made the contract, and they ask that those costs may be added to and form part of the damages which are due to the Council under the contract. He had no doubt that the course taken by the Council was a reasonable course, and he thought that if before any of the costs had been incurred they had given the defendant company notice of the nature of the disputes with the contractor and of the proposed arbitration, and the defendants after receipt of such notice had either expressly or impliedly by their conduct requested the Council to proceed with the arbitration, they might have rendered themselves liable for the costs; though that liability would not have been based on the conditions of the bond but would have been an independent cause of action arising out of the express or implied request. Here no such notice was given, and there was no express or implied request, and he had therefore to see whether the defendants were liable under the terms of the bond. Now the condition of the bond was that the contractor should perform, fulfil, and keep all the terms, conditions, and stipulations of the contract. The question, therefore, was whether the failure by the contractor to pay the costs was a breach of his contract. As a rule, he said, when costs are to be paid as the result of an action or of proceedings before an arbitrator they fall to be paid by reason of the judgment given in the action or of the arbitrator's award, and not by reason of a stipulation in the contract out of which the dispute arose which formed the subject-matter of the action or reference. He had looked carefully through the contract and had been unable to find any undertaking by the contractor to pay any costs which might be awarded against him, and under those circumstances he had come to the conclusion that he could not add the costs to the amount of the damages that were awarded, and so make the defendants pay the costs under the terms of their bond.

After this decision local authorities and employers generally will probably see that their guarantee bonds contain a provision for the payment of costs arising out of disputes as well as the actual damages sustained.

A guarantee of this nature, which is a promise to pay the debt of another, is within the Statute of Frauds, and must therefore be in writing, which must be signed by the person to be charged or by his duly authorised agent, and the document must set out in detail the nature of the transaction and the obligations arising out of it, otherwise the guarantee cannot be enforced in an action at law.

In the case of Mountstephen *v.* Lakeman (1874) 7 H. L. Cases 17, the defendant was the Chairman of the Board of Health at Brixham, and the plaintiff was a builder and contractor at Torquay. In the early part of 1866 the plaintiff had completed for the Board a main sewer for the town, and the Board had directed him to purchase pipes which would be required to be used in making the connecting drains between private houses and the main sewer. The Board had under the Public Health Act of 1848 given notice to the owners of certain houses near the main sewer to connect the drains of their houses with it, or in the event of default on the part of the owners the Board would make the connections at their expense. The notice was disregarded, and no subsequent resolution was passed by the Board authorising the connections to be made on their behalf. The Surveyor to the Board suggested to the defendant that he should make the connections, but the plaintiff declined to do so until he had the order of the Board. Before, however, the date on which the notice to the house owners expired, the plaintiff having finished the main sewer and being about to remove his carts and materials, Lakeman asked him what objection he had to making the connections, to which the plaintiff replied, "None, if you or the Board will order the work or become responsible for the payment"; on which the defendant said to the plaintiff, "Go on and do the work and I will see you paid." The plaintiff did the work, but the Board, alleging that no order had been given by them for the work, declined to pay for it, and Mountstephen brought an action against the defendant for the amount due for the work.

The case was tried at the Devon Summer Assizes in 1870, when the jury returned a verdict for the plaintiff for £287. Upon a motion to set aside the verdict in the Queen's Bench the court held that coupling the expressions used with the conduct and position of the parties the defendant's words did not amount to an engagement to be primarily liable for the work, but only to a promise that if the plaintiff would do the work on the credit of the Board the defendant would pay if the Board did not; and that this was a promise to be answerable for the debt of another within sect. 4 of the Statute of Frauds, though in fact the Board had never been indebted, and as this promise was not in writing it could not be enforced.



Manu Marble Statue for Court House, New York.

Mr. Augustus Lukeman, Sculptor (*See* "Some Modern Sculpture," *page* 183.)

On appeal to the Exchequer Chamber this decision was reversed, that court being of opinion that there was evidence to go to the jury on the question whether the defendant had not by his words made himself primarily liable.

On an appeal to the House of Lords by Lakeman, the Lord Chancellor (Lord Cairns) said the question for decision was whether there was or was not evidence of an original liability on the part of the defendant to pay the plaintiff for the work to be done, and that question fell to be determined really upon the consideration of the evidence of the plaintiff in the action. That evidence might have been accepted by the jurymen or it might have been rejected, but the question was whether or not the learned judge would have been right in directing a nonsuit on the ground that there was no substantial evidence to go to the jury. The plaintiff, in cross-examination, said that he knew nothing of the resolution of the Board that notices should be served on the owners of the houses requiring them to connect their houses with the main sewer, but that the Surveyor asked him if he would procure 1,300 ft. of pipes and if he would do the work. His reply to the Surveyor was that he would not do the work unless the Board would be responsible for the payment, as he would not take orders from the owners of the property. A resolution of the Board was produced which showed that notices were to be issued to the owners and occupiers of the property and that the plaintiff should procure 1,300 ft. of pipes. It was admitted that this resolution was communicated to the plaintiff, who said that, relying upon it, he procured the materials. The plaintiff might have been right or wrong in thinking that was a proper order, but he was satisfied with it. No order, however, was given for anything further to be done, and he refused to lay the pipes without an order from the Board. The plaintiff then met the defendant, who was the Chairman of the Board, who said to the plaintiff, "You go on and do the work, and I will see you paid." It appeared to his lordship that what happened was that the plaintiff after his conversation with the Surveyor stated to the defendant that the reason why he had refused to do the work was that he had got no order to do it, that he would do the work if he had a formal order from
the Board, or if he had a personal ord
the defendant himself, and that th
the defendant, who perhaps wished the
be immediately done, said, "You go on
the work; do not concern yourself u
subject of whether you have an order f
Board. I will be your paymaster; I
you paid." Now, if that was the mea
these words, he thought there was
and strong evidence to go to the jury t
go-by was entirely given to the ques
an order of the Board, and that the de
stepped in and undertook himself, as a
of primary liability, to pay for the wo
would be done. Against that primary
the defendant might afterwards, as Ch
of the Board, have sheltered himself by o
from the Board the consent to make a
order, and acting upon and paying und
formal order, but he did not do that;
what the contractor required—that is,
the contractor in the position of havi
and there an absolute contract made, a
only contract which then and there abs
could be made would be a personal and
contract by him to pay the contractor
work to be done.

Lord Selborne said that at first s
appeared as if the judges in the Court of
Bench thought that there might in th
have been a valid contract of suretys
a secondary liability upon the princip
guarantee for the debt of someone el
he was unable to follow that reasoning.
could be no suretyship unless there
principal debtor, nor can a man guarant
body else's debt unless there is a debt
guaranteed. The tendency, therefore,
view of this contract which would plac
the position of a guarantee for a future
to be undertaken by the Board wo
absolutely to defeat the whole purpose
conversations, which was to remove a d
then pressing upon the mind of the cont
as to whether or not he had sufficient au
from any one to go on with the work; a
answer was given in terms of the pres
the express purpose of inducing him to
at once.

The decision of the Court of Exc
Chamber was therefore upheld and the
dismissed.

It may be noted that if in this ca
defendant had told the contractor t
would see that he would be paid by the
the matter would have been on an e
different footing, and if the defendant h
that he would pay for the Board it woul
been a guarantee that would have
unenforceable unless reduced to writin
signed by the defendant.

THE LAW AS TO BUILD LET AS FLATS.

Although of late years the prac
letting out buildings in separate floors,
as residential flats or for business pu
has acquired great popularity, yet t
regulating the respective rights and
of landlords and tenants in such circum
remains in some uncertainty and is cu
obscure. In a recent article we refe
the case of Hart v. Rogers and some
decisions on this subject, but there are
two points connected with the decision
case which raise questions of such di
that we may revert to the subject.

In Hart *v.* Rogers (the *Times*, Decen
1915) the plaintiffs were suing for two qu
rent of a furnished flat and a sum fixed
lease to be paid at the end of the tena
respect of dilapidations. The defendant
that, owing to the defective condition
roof from neglect to repair, water had
his flat, rendering it unfit for habitatio
he counterclaimed amongst other thi
respect of the illness of his wife, wh
alleged was caused by the leakage.

As a breach of even an express coven
repair is no defence to an action fo
(Surplice *v.* Farnworth, 7 M. & G. 576),
a matter for cross action, or nowadays c
claim, the important findings in this case
upon the counterclaim.

The point as to the illness of the defe
wife can be disregarded, as that was h

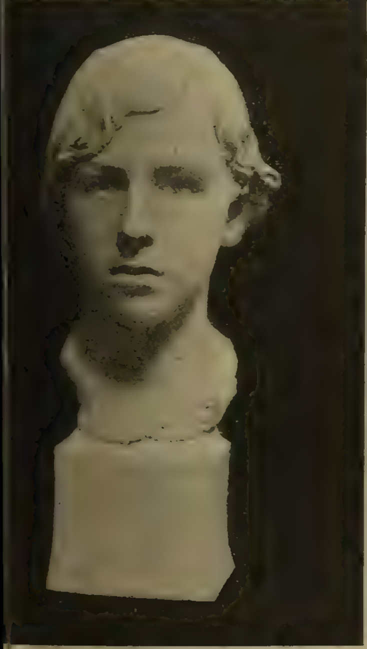
e been caused by the damp, the judge, er. found that the flat was rendered ntable for a time and allowed something counterclaim for discomfort and inter- with the tenancy, but—and this is the ant point in the case—he only did so on ting that there was an absolute duty on ndlord to keep the roof in repair, and, reviewed the authorities, he expressed doubt on the point as there was no e negligence proved in the case, and mated that if the true view of the law at in such circumstances the landlord nly take reasonable care to keep the order, then the plaintiff would be entitled gment both on the claim and on the rclaim, and the defendant's case would

difficulty lies in determining what is ty implied by the law where part of the es remain under the control of the d. In the case of unfurnished houses s no warranty implied that they shall for occupation, whilst in the case of ed houses there is an implied warranty ey shall be fit for human habitation at nmencement of the tenancy, in the case ldings let as flats where the landlord control of certain portions, however, the pears most uncertain.

ur former article we referred to some of ses on this question—Hargroves v. p ([1905] 1 K. B. 472), for instance; but se is distinguishable from that we are nsidering, because in that case there was g of negligence on the part of the land- hich amounted to an act of commission part leading to the damage. In the case v. Hancock ([1893] 2 K. B. 177), also d to in our former article, the plaintiff t a tenant, but a person visiting the on business; one of the steps in the se was in a defective state, and the ff fell and broke his leg. This was se upon which Mr. Justice Scrutton his judgment in Hart v. Rogers, but the for his hesitation is that that case has uestioned in subsequent decisions.

Hargroves v. Hartopp, the Lord Chief expressed some doubt whether an e covenant to repair could be implied, Huggett v. Miers ([1908] 2 K. B. 278), in which that principle was endeavoured shown to extend to the lighting of a n staircase, the Court of Appeal ed some doubt on the correctness of ision in Miller v. Hancock.

Hargroves v. Hartopp, the Lord Chief Justice expressed the opinion that the court in Miller v. Hancock intended to lay down the same principle as applying to the tenant as to a visitor, the plaintiff in that case, but here again a difficulty arises, as in a recent case, Lucy v. Bawden ([1914] 2 K. B. 318), where the wife of a tenant (who is in the position of a stranger to the contract of tenancy—see Cavalier v. Pope ([1916] A. C. 428)—had sustained injuries by falling over a low coping, Mr. Justice Atkin limited the decision in Miller v. Hancock to defects in the nature of a trap.



ila": Head of Young Girl (Plaster).

By Mr. W. Reid Dick.

oyal Academy, 1915.)

Thus, unless actual negligence can be proved on the part of the landlord as regards those portions of the premises which remain under his control, there is considerable doubt whether an absolute covenant can be implied on his part to keep those portions in repair, and a tenant of a flat who finds his portion of the premises rendered untenantable and who may, moreover, have sustained damage to his furniture, may find himself also confronted with litigation of an uncertain character if he attempts to seek any redress.

The layman may find these legal intricacies incomprehensible, and we fear he may find our explanation of the law confusing, but we have only referred to this question again that we may point out to him an easy means of securing himself. It is only the implications of the law that in these cases remain in uncertainty, but these implications only come into operation in the absence of express agreement; therefore there is no difficulty when taking a flat in so framing the agreement that the obligations of the landlord as regards those parts of the premises which remain under his control are clearly defined. Thus the agreement should stipulate that the landlord shall keep the roof in good repair, the staircases in good condition, and well lighted, etc.

LAW REPORTS.

Court of Appeal.

(Before the Master of the Rolls and Lords Justices Phillimore and Warrington.)

Building Scheme: Alleged Infringement of Covenant:

Wood v. Jacobs and others.

This case was heard on the 17th ult. upon the appeal of the defendants from a judgment of Mr. Justice Neville in the Chancery Division.

The action was brought by Mr. S. M. Wood, of East Dulwich, against the Shirt and Collar Dressing Company, of Beckenham, Kent, for an injunction to restrain the defendants from erecting a workshop or any building other than a dwelling-house on a piece of land abutting upon Avenue-road, Beckenham, in alleged breach of their covenant. Plaintiff also asked for a mandatory order that any building which had been erected upon the site should be forthwith pulled down and removed.

It appeared that the Beckenham Park Estate was acquired in 1868 by the Second Birkbeck Building Society, who laid it out on a building scheme in plots, imposing certain conditions and stipulations upon purchasers. One of these stipulations was that no factory should be erected upon the estate except at a distance of 60 ft. from the boundary line. The plaintiff purchased a corner plot at the corner of Avenue and Mackenzie roads, and the adjoining plot was purchased by Mr. B. Appleton and Mr. L. S. Smith, who traded as the Penge Shirt Manufacturing Company, and who, as the Shirt and Collar Dressing Company, erected a pyjama and shirt factory on their plot. It was erected on a line with the dwelling-houses and not 60 ft. from the boundary line.

Evidence was given to show that the defendants employed a number of women at the factory who worked sewing-machines, the power being supplied by electricity from a three-horse-power motor, and the plaintiff's contention was that this was a factory within the meaning of the stipulation.

For the defence it was submitted that the defendants' premises were not a factory within the meaning of the stipulation and in the sense intended by the vendors, and defendants' evidence was to the effect that there was no noise to be heard, and no vibration noticeable outside the building.

Mr. Justice Neville held that it was clear a building scheme was intended, and that the building in question was a "factory" within the meaning of the covenant. He accordingly granted the injunction claimed, with costs; but as the work the defendants were doing was a useful one, his Lordship stayed the operation of the injunction until three months after the declaration of peace.

Mr. C. E. Jenkins, K.C., and Mr. Carr appeared in support of the appeal; and Mr. Bramwell Davis, K.C., and Mr. H. Langford Lewis for the respondent (the plaintiff).

At the conclusion of the arguments their Lordships affirmed the decision of Mr. Justice Neville, and dismissed the appeal, with costs.

Official Referee's Court.

(Before Mr. Verey.)

Action to Recover Possession of Houses: Hind v. Nowell.

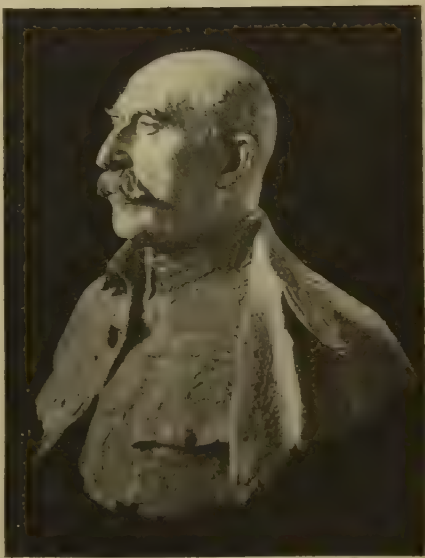
This was an action to recover possession of fourteen houses in Skidmore-street, Stepney, four houses in Ernest-street, Stepney, and a mission-hall adjoining, all of which were held under a common title. There was also a claim for damages for breach of covenant of the lease in failing to keep the premises in repair, which was the ground of forfeiture. The defendant in his defence denied that the plaintiff had suffered damage, and said that delay in carrying out the repairs was consequent upon the difficulty of finding labour owing to the war. The plaintiff purchased the leasehold interest in the property from the ground landlord in July, 1907, and the lease will expire on March 25, 1917. After the purchase, dilapidation notices were served upon the then tenants and the premises were put into proper repair, but they had not been kept so. A sub-lease was granted to the defendant in March of last year for the sum of £5, but in buying dilapidated property, said counsel, he was taking upon himself considerable liability. He had paid the ground rent up to Christmas of last year, but it was accepted without prejudice to any claim for breach of covenant.

Evidence was given on both sides, and in the result,

The Referee found that there had been a breach of covenant, which entitled the plaintiff to the forfeiture of the lease, and in giving him possession of the premises he awarded him £40 damages and £5 for mean profits, with costs.

SOME MODERN SCULPTURE.

We illustrate three sculpture subjects, one of which, the portrait bust of the Duke of Connaught, illustrates the naturalistic school of sculpture and is as realistic as a photograph, while the statue of Manu, designed as an accessory to the New Court House, New York, has the dignity attaching to the well-considered use of convention in art. Between the two types is the delightful girl's head, executed by Mr. W. Reid Dick, which is instinct with life and character.



H.R.H. The Duke of Connaught: Portrait Bust.

Mr. Frederick Lessore, Sculptor.

THE BUILDING TRADE.

A FUTURE OPPORTUNITY.

TOWN improvement schemes and the formation of garden cities will add to the architectural appearance of our country in the future, and, it is to be hoped, will be financially possible at no remote date after the conclusion of peace; but there is a smaller and humbler field that might with advantage be exploited in the near future, which would involve comparatively small expense, and which should offer opportunity for the investment of private money with fair certainty of a good return. We refer to the conversion of many houses in London and in other large towns which have been built in days when service was both easier to obtain and cheaper than it is now. There is much house property which is still too good to be pulled down and too inconvenient to let readily, as it stands, at adequate rents, which might well be converted by the rearrangement of kitchen premises, cutting up bedrooms, the introduction of gas cooking and other labour-saving appliances; and, as the demand for cheaper houses in which service can be economised will be more and more acute after the war, there will be room for the work of small syndicates and companies, who would act on the competent advice of architects, and buy or lease property which is becoming derelict, with a view to improving it. It would, in fact, pay both gas and other heating engineers to subscribe capital for such purposes, as they could demonstrate the great advance which modern invention has put at our disposal, and there are whole tracts of London which might revive in capital value and in popularity if intelligent means were taken to do away with the disadvantages which have led to an exodus of population from them.

St. John's Wood, Belsize Park, and Maida Vale, and similar districts, might be more popular if they were taken in hand, for in a great many cases the exodus to newer and more outlying districts is simply caused by the impossibility of living comfortably without more service than it is easy to obtain. There are many advantages of existing houses in such districts over the slighter structures now put up. The walls are usually thicker, the rooms larger, while bedrooms are kept clear of the roof projections, which make the introduction of ordinary furniture in newer and smaller houses a Chinese puzzle. Among the rearrangements which are often possible at small expense is the treatment of the front space and garden in rear of the houses in many London districts, for with a little thought and management quite a small garden may add immensely to the appearance of a house—a few flagged pathways and the trimming up and repair of boundary walls, and the planting of a few trees will frequently convert a small garden into a pleasing and dignified addition to a house instead of suggesting, as it often does, an untidy drying-ground for washing. A good deal has been done by individuals who have found it not an unprofitable investment of capital and ingenuity, but the advantage of doing such work on a larger scale is manifest. Extensive advertising, which is beyond the reach of the individual, is possible for a syndicate or company, and the same processes by which a new building district is made known and popular could be applied equally to making known the reconstruction of older districts. Like other building ventures it requires care and knowledge, but given these we believe it will afford a good return to the careful and experienced speculator.

SURVEY OF LONDON.

The Local Government Records and Museums Committee of the London County Council have decided to discontinue the printing of further volumes in the series of the Survey of London until after the conclusion of the war.

NEW ZEALAND FEDERATED BUILDERS' AND CONTRACTORS' INDUSTRIAL ASSOCIATION OF EMPLOYERS.

THE fifteenth and sixteenth annual meetings were held in the New Zealand Employers' Federation Rooms, Wellington, on November 2, 1915, and following days.

The President, in the course of his address, said the present effect of the war on the building trade had not been serious in New Zealand, although prices for materials had in some instances increased considerably. It was hard to say what the after-effects of the war might be, but it was quite apparent that much money that in the ordinary course of business would have been devoted to regular commercial undertakings was being diverted into the stream of the war. He considered that, while due care and prudent economy should be exercised, it would be unwise to follow a plan of over-cautiousness and pessimism.

The Secretary presented a Report covering the two years ended October 31, 1915, from which the following information is taken:—

Architects' Bill.

This measure was completely redrafted when submitted to the 1913 Parliament, and as passed into law it does not contain any such provisions as were originally proposed that will prove repugnant to builders or will hamper them in carrying out their legitimate rights as builders and contractors. For this members are largely indebted to the valuable and practical evidence given before the Committee of the House of Representatives dealing with the Bill by members of the Executive.

Wages Protection and Contractors' Lien Act.

Earnest representations were made to the Government, urging amendment of this Act in the direction of affording better protection to contractors' interests. The promise had been given by the Prime Minister that an amending measure would be brought before Parliament, and the Committee has good reason to believe that a Bill remodelling the whole Act was in preparation. Owing first to the strike, and later to the outbreak of war, the pressure of work on Ministers and Parliament was too great to allow of the whole subject being dealt with, and it is doubtful if anything will be done to further amend the Act during the continuance of the war. Although the Committee has not succeeded in securing the introduction of a comprehensive measure dealing with the whole subject of the Lien Act, it has pleasure in placing on record the successful efforts put forth to have clearly defined what constitutes "completion of contract" within the meaning of the Act. Owing to the ambiguous wording of sect. 59 of the Act, and to an opinion expressed by one of our Supreme Court Judges, certain owners and architects claimed that contractors were not entitled to payment of the full amount of contract (less 5 per cent. for maintenance) until the expiry of the maintenance period, and they therefore retained 30 per cent. of the contract prices for four months. This interpretation was causing serious loss and hardship to a number of builders. Steps were taken to move for the introduction of a short amending Bill (which subsequently became law), which would clearly indicate that when a job was actually finished the contract was completed, notwithstanding a covenant in the condition for maintenance of the premises after completion.

Arbitration Act.

The Executive has at different times submitted proposed amendments of this Act to the Government and to the Employers' Fed tion, several of which have met with appro and have found their way into Bills submi to Parliament, but have not yet been placed the Statute Book. An important altera sought is the increase to five years as the pe for which the court may make an award. amendment is of special importance to ma builders and contractors, as the making of s period awards means that employers are sooner through with one dispute than ano is upon them. Continual annoyance friction has resulted from the tardy issu copies of new awards, and this was rece emphasised in a case, when two months elap before the awards were supplied. Applica to the court to have the date of the aw altered was unsuccessful, but His Honour Justice Stringer promised he would recomm to the Labour Department that amendm of the Act be secured to provide that an aw should not begin to operate until the expir a limited period of time after employers received their copies of award. It is hoped Honour's recommendations will be acted u as it is certain it will remove an injustice save a large amount of friction and trouble.

General Conditions of Contract.

On the whole the present general conditi of contract have proved of great value to trade, and, although there are some omissi and deficiencies in them, they nevertheless affording contractors a measure of protec and recognition of the rights of the trade previously obtaining in the Dominion. term of five years, for which they were set has now expired, and they are again ope revision should either architects or builders for another Conference.

Among the matters considered and reso upon by the annual meetings were the foll ing:—The question of the formulation scheme of insurance for builders' fire accident risks; liability of main contractor loss by fire incurred by a sub-contractor recommendation to employers to take as m apprentices as possible; an instruction to Executive to endeavour to secure provision the industrial conciliation and Arbitration that will make awards more definitely bin on persons who employ tradesmen but who not original parties to the awards; as to need for architects to secure building and o permits from local authorities before cal for tenders; that the Institute of Architect asked to agree that tenders for all contract opened in the presence of any builders who be present when tenders close; the neces that all work carried out by contract should under the control of the principal contracto

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NEW PREMISES, TUNBRIDGE WELLS.

The new premises of the Tunbridge W Gas Company, situate in High-street, recently been opened. The front of the buil is faced with red brick and stone facings, lower portion being of Portland and the u of Bath stone. Surmounted is a balust with pediment in centre, with a carved s date panel. There is an oak and plate double front with central entrance to show-rooms and offices. An oak staircase, large mullioned and lead-light glazed wind leads to the upper floor. The whole of basement of the premises has been utilised carrying on the work of the company in fit and maintenance and meter testing. A space is provided in the rear for receiving packing. It is entered by doors from side passage, with workmen's lavatories meter testing-room, workshops, stores, issue departments for the varied fit required. There is also a suitable office the chief inspector. Mr. Egbert Cronk the architect, and Messrs. Thos. Bates & the builders.

POSED NEW BUILDINGS AND OTHER WORKS.*

nese lists care is taken to ensure the
y of the information given, but it may
nally happen that, owing to building
taking the responsibility of commencing
efore plans are finally approved by the
uthorities, "proposed" works, at the
f publication, have been actually com-
. Abbreviations:—T.C. for Town
; U.D.C. for Urban District Council;
for Rural District Council; E.C. for
ion Committee; L.G.B. for Local
ment Board; B.G. for Board of
ans; L.C.C. for London County Council;
r Borough Council; and P.C. for Parish
.

rsham.—The R.D.C. has approved of the
ng plans:—Bungalow. Cross Lanes. Chal-
. Peter. Mr. J. Lilley; cottage. Chalfont
ter. Miss Welch; alterations. Prestwood
Messrs. Recky; additions to house. Chal-
. Peter, Mr. E. Franklin.
thill.—Messrs. John Sarson & Co., of
er. propose to build a factory at Ampthill.
ngham.—The Sites and Buildings Sub-
ttee is seeking approval for preliminary
for providing the additional accommoda-
quired by the new scheme of instruction
nce. manual and domestic subjects.
ington.—The B.G. has decided to carry
number of small alterations at the isola-
ock.
ghty Ferry.—By the death of Mrs. J. G.
. of Broughty Ferry, important bequests
husband mature. Mr. Orchar directed
stees on the death of his wife to erect a
nent building for the purposes of an art
. Part of the residue is to be devoted to
rchase of a site in Broughty Ferry, and
ribution towards the erection on it and
nent of a church in connection with the
of Scotland.
ie.—The Town Clerk of Buckie has
d intimation from the Fishery Board for
d that the Board has decided to give a
grant, amounting to £8,000, to be applied
s the completion of the modified scheme
bour extension approved by them and the
pment Commissioners.
borne.—At a recent meeting of the U.D.C.
for a workshop for Mr. W. G. Bicknell.
arren-street, and a stores for Messrs.
t, Sons, & Co., were referred to the Light-
d Town Improvement Committee, with
to act.
ntry.—The following plans have been
ed by the City Council:—Generating
to picture theatre. Stoney Stanton-road.
Ir. S. Warner; refreshment rooms
led). Holbrooks-lane. for Mr. E. Turner;
g and machine shop. Spon-street, for
Whitworth. Ltd.; eight houses. Kings-
enue. for Mr. A. Barratt; two houses
hop and lock-up shop. Upper Well-street.
. G. H. Broad; extension of stamping
Crow-lane. for Rudge-Whitworth. Ltd.;
on workers' hutment. Stoney Stanton-
for the Young Men's Christian Associa-
office and tool shed. Radford Works.
r-road. for the Daimler Company. Ltd.;
use. Binley-road. for Mr. C. Blockley;
on of blacksmith's shop. Foleshill-road.
Standard Motor Company. Ltd.: four
Lowther-street. for Mr. E. Woodward;
uses. St. Osburg's-road. for Mr. T. Dalton;
uses. Allesley Old-road. for Mr. B. Ault;
use and motor shed. Lythall's-lane. for
. Daniels; Working Men's Club. Eden-
for the Committee; enclosures for dust
ors. Sandy-lane, for the Daimler Com-
Ltd.; glazed roof. Crow-lane. for Rudge-
orth. Ltd.; ten houses. Fisher-road. for
. Moss & Co.; nine houses. St. George's-
or the executors of the late Mr. G. Storer.
pton.—The Crompton D.C. has passed
for several petrol stores for local mills.
r.—The Town Clerk has received from
. Worsfold & Hayward. on behalf of
. Friend & Co.. plans of the proposed
stores under the Viaduct arches.
in.—In a report of the Housing Com-
on Spitalfields area it is recommended
£8,000 voted for the erection of buildings
Ormond Market area will not be required.
at sum of revenue be applied to Spital-
which would enable the committee to deal
e-third of the scheme approximately. As
area in the North Lotts, the City Archi-
as prepared a scheme covering three
s. at an estimated cost of £134,294. The
ct has also estimated £85,487 for three
s in the Newfoundland-street area, the
ed capital outlay being £118,187.
burgh.—The Edinburgh Dean of Guild
has granted warrant to the Royal Infirm-
alterations at 19. 21. and 25. Archibald-

mont.—The Egremont D.C. has agreed to
for the last instalment of loan on the
scheme. amounting to £3,600.
hill and Hawkesbury.—Foleshill D.C. has
red plans of proposed extensions by the
and North-Western Railway Company.

Galway.—Arrangements are being made for holding a bazaar in the summer in aid of the funds for the proposed new cathedral.

Glasgow.—Glasgow Dean of Guild Court has granted the following linings:—Messrs. F. D. Cowieson & Co., structural engineers. 3-25, Charles-street. St. Rollox, to erect a workshop there; Sir John Stirling-Maxwell. Bart., to form a street and sewers off Glasserton-road. Newlands; Messrs. A. & J. Main & Co., Ltd., Clydesdale Ironworks. Possilpark. to erect additions to Germiston Ironworks. Petershill-road; the Steel Company of Scotland. to erect an electric power station at Blochairn Ironworks; Messrs. Barr & Stroud, Ltd., Caxton-street. Anniesland. to make additions to their works there; Mr. David Lamb. builder, 65, Possil-road, to erect a terrace of twelve self-contained dwelling-houses on the north side of Glasserton-road, Newlands; Messrs. Redpath, Brown, & Co., Ltd., constructional engineers, 19, Waterloo-street, to erect buildings in North Canal Bank-street.

Gravesend.—A deputation from the Gravesend Corporation is to wait upon the Port of London Authority in regard to a proposal to construct at Gravesend a deep-water wharf.

Hartlepool.—The Hartlepools Port Sanitary Authority has instructed the Borough Engineer to prepare a plan for a pavilion at the hospital.

Hitchin.—The U.D.C. has passed plans of additions to the Woolpack public-house. submitted by Mr. J. W. Bailey. on behalf of Messrs. E. K. & H. Fordham, Ltd.

Hornsey.—The following plans have been approved by the T.C.:—Conservatory at the rear of No. 72, Oakfield-road. Stroud Green. by Mr. G. Inwood. of Priory-avenue; for the conversion of stabling into two garages. at No. 6, Avenue-mews. Muswell Hill. by Messrs. Edmondsons, Ltd.; for entrance lobby at the rear of Nos. 75 and 77, Crouch Hall-road. Crouch End. by Mr. H. D. Evans. Hornsey Rise; for the conversion of one house into two houses. at Hope Cottage. North-hill. Highgate. by Messrs. Southcott & Co., Southwood-lane; for the conversion of stabling into classrooms at the rear of Southwood Hall. Highgate. by Messrs. Prickett & Ellis. High-street. Highgate.

Huddersfield.—At a recent meeting of the T.C. the Borough Engineer submitted ten different specimen plans of houses proposed to be erected for the working classes. together with estimates of the cost. and it was resolved that plans B. E. and H be approved. and that the Engineer prepare the necessary plans and specifications, etc., with a view of advertising for tenders.

Linthwaite.—Plans passed by the U.D.C.:—For extension to No. 1 and No. 2 mills at Union Mills. Milnsbridge, for Messrs. John Crowther & Sons; motor garage at Manchester-road. for Messrs. James Dyson & Sons; wood store shed at Manchester-road, for Messrs. W. H. Dyson & Son.

Merthyr.—Merthyr Corporation Housing Committee has asked the Architect to make a report upon a town planning scheme.

Ossett.—Plans passed by the T.C.:—Coal-places at Westfield Mill. for Messrs. Jonas Glover. Ltd.; alterations to Ivy Bank. Station-road. for Mr. T. G. Brook; alterations and additions to an electrical sub-station at Spring Mill. for Messrs. Bickle Bros.; Sub-station in Wesley-street. for Messrs. E. Clay & Son.

Richmond (Yorks).—The R.D.C. has approved a plan for a cottage at Dalton. for Mr. Harland.

Skipton.—The U.D.C. has agreed that certain alterations be carried out at the slaughter-houses. involving the provision of lairage accommodation. a shed for carts. etc.

Smethwick.—Plans approved by the T.C.:—Offices in Rolfe-street. for Messrs. S. W. B. Stephen & Co.; new shop. for Messrs. Muntz's Metal Company, Ltd., Alma-street; pickling shop. French-walls. Alma-street. for Messrs. Muntz's Metal Company. Ltd.; power house at St. George's Works. for Messrs. Guest. Keen. & Nettlefolds. Ltd.; motor garage and porch in Suffrage-street. for Mr. F. Collins; extension to works in Rolfe-street. for Messrs. Harper. Son. & Bean; outbuildings. rear of Picture House. Bearwood-road. for Mr. E. Hewitson; motor house for Mr. J. T. Brockhouse. United Counties Bank. High-street; garage for Messrs. Chance Bros. & Co., Ltd., in Spon-lane; alterations to No. 63. Stoney-lane. for Mr. G. Willey.

Southgate.—A preliminary L.G.B. inquiry was recently held at the Southgate Council Offices, to consider the proposal of the Council to adopt a town plan.

Spain.—Tenders will be opened at the "Casa Consistorial," Ferrol. on March 22, for the carrying out of certain street paving and drainage works in that town. at an estimated cost of 110,616 pesetas (about £4,400). The *Gaceta* of February 11 notifies that tenders will be opened thirty days from that date by the municipal authorities at Linares. for the construction of a school at that town. at an estimated cost of 99,681 pesetas (about £3,990). The "Dirección General de Obras Públicas" has authorised the municipal authorities of San Sebastian to construct a bridge over the mouth of the Rio Urumea.

Stafford.—The L.G.B. has issued an order for the extension of the borough of Stafford. The boundary submitted by the Corporation has. with three small exceptions. been approved by the Board. Stafford Castle and a strip of land adjoining has been excluded. and there is a slight diversion in Tillington and another in Hopton and Coton.

Stockton.—The Plans Committee of the U.C. has passed plans for six houses for Mr. J. W. Bainbridge in Mowbray-road. Norton.

Toronto.—The Iperial Trade Correspondent at Toronto reports that a Chicago company. which has a large departmental store in Toronto. is having erected in that city. for use in connection with its mail order business. a fireproof building eleven stories high, with a floor space of approximately 9 acres.

Tranent.—The T.C. has passed the amended plans for the new picture house.

Ventnor.—The R.D.C. has approved plans deposited by Messrs. Ingram & Sons of a porch to an office in Dudley-road. for Mr. H. Milligan. and a plan redeposited by Mr. E. A. Vincent of proposed alterations to No. 79. High-street. for the trustees of the Congregational Church.

GENERAL BUILDING NEWS.

ARBROATH INFIRMARY.

Arbroath new Infirmary buildings are practically completed, and the formal opening of the institution will take place shortly. The buildings have cost a sum of £14,000. The original proposal was to reconstruct the original infirmary buildings, but the subscriptions received for this purpose exceeded what was required for the purposes of reconstruction, and the directors decided to pull down the old structure and build an entirely new infirmary. The buildings have been erected according to plans prepared by Mr. Hugh Gavin, architect, Arbroath.

TRADE NEWS.

No. 4, Fitchett's-court, Noble-street, E.C., is being rebuilt by Messrs. E. A. Roome & Co., of Crown Works, Urswick-road, Hackney, under the superintendence of Messrs. Davis & Emanuel and Henry C. Smart, architects, of 2, Finsbury-circus, E.C.

Boyle's latest patent "air-pump" ventilators have been adopted for the Council Schools, Resolven, Glam.

The Herbert Strutt Schools, Belper, are being supplied with Shorland's patent exhaust roof ventilators by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

PATENTS.

APPLICATIONS PUBLISHED.*

643 of 1915.—James Jackson, Stanley Greenhalgh, and Andrew Robertson: Jigging or shaking conveyors.

745 of 1915.—Edward James Davison and Charles Percival Tooley: Chequer bricks as used in the chequering chambers of carburetted water-gas plants or coke oven chambers.

816 of 1915.—Fred Willard Hargrave and James Augustus Wheeler: Methods of forming fireproof building construction, such as doors, trim, or the like.

868 of 1915.—Edward Frederick Stimson: Cut-out storage tanks for use in connection with hot-water apparatus.

899 of 1915.—John Jack and William Jack: Machines for drying and tarring road metal and other analogous purposes.

932 of 1915.—Ernest Richard Royston (Fulcher Concrete Block and Paving Company, U.S.): Moulding-presses.

983 of 1915.—Thomas McRae, jun.: Roof ventilators.

1,069 of 1915.—Wilfred Hiram Lowe and John Shepherd: Lever locks and latches.

1,220 of 1915.—Frederick William Edlin: Construction of floors and the like.

1,301 of 1915.—Arthur Gerald Gray: Apparatus for scrubbing floors, decks, and the like.

1,422 of 1915.—Arthur William Curran Schelff and Thomas Stamps Allden: Ferro-concrete structures.

1,527 of 1915.—Henry Frederick Farrar Sedgwick: Machines for bending metal sheets, and for like purposes.

1,532 of 1915.—Wilberforce Cobbett: Means and apparatus for the automatic discharge of sewage and liquids from tanks, sewers, or other receptacles.

1,858 of 1915.—Ernest Sidney Dupree: Fittings for spring roller-blinds.

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also our list of Competitions, Contracts, etc., 188.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness.	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9¼	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8¾	8¾	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	8½	8½	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8¼	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10	10	10	8½	7½	7½	7½
Leicester	10¼	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne.	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10½	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10	10½	9½	10	9¼	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

2,775 of 1915.—Leslie Sylvester Hackn Ventilating systems and apparatus therefo

2,796 of 1915.—Henry Neville: Fasten for windows.

3,059 of 1915.—Frederick Johns Hodg Accelerated circulating system for low-pres hot-water heating apparatus.

3,095 of 1915.—Henry Schrimge Valentine: Gas fires.

3,255 of 1915.—William Hensman: escapes.

3,377 of 1915.—Jane Lister (*née* Willian Screw socket or wall plug.

3,819 of 1915.—John Henry Doherty: or other letter-boxes.

3,842 of 1915.—George Rutter: Means appliances for facilitating the raising lowering of heavy weights, specially applic for working scenery and theatrical effects.

3,892 of 1915.—Hubert William Freebu Means for cutting tubes and the like.

4,013 of 1915.—Hans Weide: Latches.

4,014 of 1915.—Hans Weide: Latches.

4,369 of 1915.—Robert Falkland Carey Waygood Otis, Ltd.: Rotary pumps or mot

4,890 of 1915.—Norman Frederick Rams Locks and latches.

4,969 of 1915.—Walter Jackson: Chim pots, ventilating tops, or the like.

5,823 of 1915.—Charles Edward Lu Folding-gates.

5,942 of 1915.—Frederick Charles Til Brackets and like supports.

6,911 of 1915.—James Damrel Prior: Bo of heating apparatus and hot-water su systems.

7,240 of 1915.—William Thomas Ke and John Hillis: Sliding windows.

8,977 of 1915.—Fred Dyson: Gates.

9,139 of 1915.—Charles Pattinson: Gla for roofs.

10,077 of 1915.—Secondo Sacerdote: G for protecting the faces of workmen.

10,139 of 1915.—George Durham and Cha William McQuirk: Process of cleaning surf

10,587 of 1915.—Ernest Henry Peabody Walter Benjamin Tardy: Emergency ex

11,247 of 1915.—Albert Alfred Buss: M for and method of covering roofs, walls, or like with corrugated or other overlap sheets.

11,497 of 1915.—James Wilson Coo Apparatus for cutting trenches for drains the like.

11,752 of 1915.—Joseph John Markovi Quick-action wrenches.

12,202 of 1915.—Frederick Thomas H Goodwin: Grinding or milling potters' like materials.

12,540 of 1915.—James Bevan Hayw and Charles Shaw: Fencing.

12,924 of 1915.—George Pate and Ar Reginald Wood: Electric heating apparatu

13,365 of 1915.—Francis Findlay: Cowl hoods for ventilation shafts.

13,440 of 1915.—James Henry Morris: D gate, and like latches.

13,613 of 1915.—Harold Wade (Pennsylv Wire Glass Company, U.S.): Skylights.

14,122 of 1915.—Henry Richard Br Tanks or the like for heating liquid.

14,199 of 1915.—William Henry Tonks Walter Sparks: Opening and closing applia for hinged windows and the like.

* * *

WAGES IN THE BUILDING TRAD

Sheffield.—The following agreement, ent into between the Sheffield Master Build Association and the bricklayers' societies to come into operation on Friday, March 3 "That a war bonus of 6d. (sixpence) day or a maximum of 3s. (three shilli per week be paid, commencing on the t day of March, 1916, such bonus to include bonus now being paid; the bonus to be ditional on not more than one hour being per day by circumstances over which employee has control; the bonus also to subject to two months' notice given at time, and in all other conditions subject to existing working rules. *N.B.*—In any where a war bonus exceeding 3s. (t shillings) per week is now being paid, foregoing resolution shall not affect the exce

ICES CURRENT OF MATERIALS.

wing to the exceptional circumstances which all at the present time, prices of materials ild be confirmed by inquiry.]

nce our last issue white and red lead have been ased, and several other prices altered.—ED.

Our aim in this list is to give, as far as possible, the age prices of materials, not necessarily the highest west. Quality and quantity obviously affect prices fact which should be remembered by those who e use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
Stocks	2	0	0
ed Stocks for Facings	2	12	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
ons	1	10	0	Best Blue Pressed Staffordshire	4	14	0
Fareham d	3	12	0	Do. Bullnose	4	18	6
Red Pressed abon Facing	5	5	0	Best Stourbridge Fire Bricks	4	14	0

ED BRICKS—

	£	s.	d.		£	s.	d.
				D'ble Str'tch'rs	17	17	6
t White, ory, and lt Glazed etchers	12	7	6	Double Headers	14	17	6
lers	11	17	6	One Side and two Ends	18	17	6
				Two Sides and one End	19	17	6
ns, Bullnose d 4½ in. ats	15	17	6	Splays and Squints	17	7	6

Second Quality £1 per 1000 less than best.

	s.	d.	
nes Ballast	7	9	per yard, delivered.
nes and Pit Sand	8	0	„ „ „
Washed Sand	9	0	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
Portland Cement	2 5 0	..	2 8 0

. £2 1s. alongside in 80-ton lots.
crete 2s. 6d. per ton extra on above.
Ground Blue Lias Lime.... 1 3 6 at rly. depôt.
.—The cement or lime is exclusive of the ordinary charge for sacks.
Stone Lime .... 17s. 0d. per yard delivered.
bridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
STONE—delivered in railway trucks at stbourne Park, Paddington, G.W.R., or th Lambeth, G.W.R., per ft. cube	1	7
lo. delivered in Railway trucks at Nine ns, L. & S.W.R., per ft. cube	1	8¾
lo. delivered on road waggons, Nine Elms pôt	1	9¼
LAND STONE—		
own Whitbed, in random blocks of 20 ft. verage, delivered in railway trucks at Vestbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W., per ft. ube	2	5½
. do. delivered on road waggons at Pimlico Vharf or Nine Elms Depôt, per ft. cube	2	6½

ite Basebed, 2d. per ft. cube extra.

OM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
ter in blocks	2	0	Closeburn Red Freestone	2	2
in blocks	1	7¼	Red and White Mansfield Random block	2	9
ill in blocks	2	4	Yellow Magnesian Limestone do. do.	3	2
y Dale in cks	2	5			

STONE—*Robin Hood Quality.*

er Ft. Cube, Delivered at Railway Depôt.	s.	d.
led random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
sawn two sides landings to sizes (under t. super.)	2	5
ubbed two sides ditto, ditto	2	8
. sawn two sides slabs (random sizes)	1	0½
o 2½ in. sawn one side slabs (random sizes)	0	8¼
to 2 in. ditto, ditto	0	6¾
YORK—		
Per Ft. Cube, Delivered at Railway Depôt.		
led random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
awn two sides landing to sizes (under 40 ft. er.)	2	3
ubbed two sides ditto	2	7
wn two sides slabs (random sizes)	1	0
lf-faced random flags	0	5

TILES.

Per 1000 f.o.r. London.

	£	s.	d.
achine-made tiles or hand-made sand-d tiles from either Broseley or fordshire district	2	12	6
ental ditto	2	15	0
d valley tiles (per dozen)	0	5	6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£	s.	d.
lue Bangor slates, 20 by 10	11	16	0
uality „ „	11	10	0
„ 16 by 8	5	15	0
lue Portmadoc, 20 by 10	11	13	6
uality „ „	11	3	6
„ 16 by 8	5	15	0

WOOD.

BUILDING REDWOOD.

Imported sizes.	Per standard. £ s. d.		£ s d.
4 in. by 12 in., 4 in. 11 in., 3 in. by 11 in., in. by 9 in., and 2 in. 11 in.	29 0 0	..	30 10 0
by 9 in., 2½ in. by 9 in., d 2 in. by 9 in.	28 0 0	..	29 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard. £ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	24 0 0	..	25 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0		more than battens.
¾ in.	1 0 0		more than battens.
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best.
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 8 10 0	..	—
Seconds do. do.	8 0 0	..	—
9 in. to 10 in. do.	7 0 0	..	—
6 in. to 8 in. do.	6 10 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	10 0 0	..	11 0 0
Do. 6 in. to 10 in.	8 0 0	..	9 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Rio do.	23 0 0	..	25 0 0
Under 2 in. thick	0 10 0		extra.

JOINERS' WOOD.

	£ s. d.		£ s. d.
White Sea First Quality Red:			
4 in. by 11 in.	35 0 0	..	36 0 0
3 in. by 11 in., and 2 in. by 11 in.	34 0 0	..	35 0 0
4 in. by 9 in.	33 0 0	..	34 0 0
3 in. by 9 in., and 2½ in. by 9 in.	32 0 0	..	33 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	24 0 0	..	25 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Seconds quality	2 0 0		less than best.
Third quality	£2 to £3		less than seconds.
Archangel White Deals—			
Best 3 in. by 11 in.	28 0 0	..	29 0 0
3 in. by 9 in. and 10 in.	26 0 0	..	27 0 0
Seconds, do.	1 10 0		less than best.
U.S. Battens	19 10 0	..	20 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 7 in. planed and shot	1 8 6	..	1 13 0
1¼ in. by 7 in. planed and matched	1 9 0	..	1 13 0
1 in. by 7 in. planed and shot	1 3 0	..	1 6 0
1 in. by 7 in. planed and matched	1 3 0	..	1 7 6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0 18 0	..	0 19 6
1 in. by 7 in. do.	1 3 0	..	1 5 6
⅝ in. by 7 in. do.	0 14 0	..	0 15 0
	Per standard.		
Columbian or Oregon Pine, best quality	35 0 0	..	40 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		„
Seconds, regular sizes	43 10 0		„
Oddments	37 10 0		„
Kauri Pine—Planks per ft. cube	0 7 6	..	—
Oak Logs—			
Large, per ft. cube	0 6 0	..	0 6 6
Small „ „	0 5 0	..	0 5 6
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super, as inch	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 5 0	..	21 5 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

METALS (*Continued*).

	Per ton, in London. £ s. d.		£ s. d.
IRON—			
Common Bars	15 10 0	..	—
Staffordshire Crown Bars, good merchant quality	15 10 0	..	16 10 0
Staffordshire "Marked Bars"	17 0 0	..	17 10 0
Mild Steel Bars	16 10 0	..	17 0 0

Steel Bars, Ferro-Concrete quality, £17 10s. basis price.

	£ s. d.		£ s. d.
Hoop Iron, basis price	18 10 0	..	19 0 0
„ „ Galvanised	30 0 0	..	35 0 0

(* And upwards, according to size and gauge.)

	£ s. d.		£ s. d.
Sheet Iron Black—			
Ordinary sizes to 20 g.	18 10 0	..	19 0 0
„ „ 24 g.	19 10 0	..	20 0 0
„ „ 26 g.	20 10 0	..	21 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	29 10 0	..	—
Ordinary sizes to 26 g.	32 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	30 0 0	..	—
„ „ 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	28 10 0	..	—
Ordinary sizes, 26 g.	29 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 15 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 0 0	..	—
Best Soft Steel Sheets, 26 g.	21 15 0	..	—
Cut Nails, 3 in. to 6 in.	18 10 0	..	19 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

	£ s. d.		
LEAD—Sheet, English, 4 lb. and up	38 0 0	..	—
Pipe in coils	38 10 0	..	—
Soil pipe	41 10 0	..	—
Compo pipe	41 10 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£ s. d.		
COPPER—				
Strong Sheet	per lb.	0 1 5	..	—
Thin „	„	0 1 6	..	—
Copper nails	„	0 1 5	..	—
Copper wire	„	0 1 5	..	—
BRASS—				
Strong Sheet	„	0 1 3	..	—
Thin	„	0 1 4	..	—
TIN—English Ingots	„	0 1 10	..	—
SOLDER—Plumbers'	„	0 0 10	..	—
Tinmen's	„	0 1 0	..	—
Blowpipe	„	0 1 2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5½d.	32 oz. thirds	8¾d.
21 oz. thirds	6½d.	„ fourths	7½d.
26 oz. thirds	7d.	Fluted Sheet, 15 oz.	5¾d.
„ fourths	6½d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	9
„ „ „ in barrels	„	0	3	10
„ „ „ in drums	„	0	4	1
Boiled „ „ in barrels	„	0	4	0
„ „ „ in drums	„	0	4	4
Turpentine in barrels	„	0	4	1
„ in drums	„	0	4	4
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	49	15	0
Red Lead, Dry	per ton	48	0	0
Best Linseed Oil Putty	per cwt.	0	11	0
Stockholm Tar	per barrel	1	12	0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	61	15	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, —; Auction Sales, xx. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

March 7.—**Watford.**—Fencing, etc.—For fencing and laying-out a new burial ground at Watford for the P.C. Plans, etc., at the office of the Surveyor, Mr. J. B. Williams, Moot Hall, Daventry.

March 9.—**Mytholmroyd.**—Extensions.—For extension to mills at Mytholmroyd, for Messrs. Ratcliffe Bros. Plans, etc., of Messrs. Jackson & Fox, architects, 7, Rawson-street, Halifax.

March 13.—**Cavan.**—Rebuilding.—For the erection and completion of new premises for the *Anglo Celt* Printing Works, Cavan. Plans and specifications by Mr. P. J. Brady, architect, Ballyhaise.

March 15.—**Carmarthen.**—Carpenters' Work, etc.—For carpenters', masons', painters', and plumbers' work for the Guardians of Carmarthen Union. Mr. John Saer, Clerk to the Guardians, 7, Hall-street, Carmarthen.

* March 17.—**Exeter and Dover.**—Repairs, etc.—The Commissioners of H.M. Works, etc., invite tenders for execution of ordinary works and repairs.

March 18.—**Roy Bridge.**—Repairs, etc.—For the mason, carpenter, and slater works of repairs and additions to shepherd's house and offices at Glenturret, Roy Bridge. Plans, etc., of Mr. Sweton Fraser, Estate Office, Gallovie, Kingussie.

No Date.—**Cardiff.**—Extensions.—For the erection of extensions to Merthyr House, Cardiff Docks. Mr. Henry Budgen, F.R.I.B.A., 95, St. Mary-street, Cardiff. Deposit cheque, £2 2s.

No Date.—**St. Annes-on-the-Sea.**—Flooring.—For wood block floor for the games pavilion, 225 yds. super. Alternative prices for oak and red deal. Concrete foundation provided by the U.D.C. Particulars of the Surveyor.

FURNITURE, MATERIALS, etc.

March 3.—**Newport (Mon.).**—Materials.—Supply to the Corporation of builders' materials for six or twelve months. Tender forms from the Borough Engineer's Office.

March 4.—**Cardiff.**—Timber.—Supply to the City of Cardiff E.C. for twelve months of timber for manual instruction. Forms and conditions of tender from Mr. John J. Jackson, Director of Education, City Hall, Cardiff.

March 4.—**Southall-Norwood.**—Materials.—Supply to the U.D.C. of builders' materials, from April 1, 1916, to March 31, 1917. Forms of tender, etc., of Mr. Reginald Brown, M.Inst.C.E., M.I.Mech.E., F.S.I., etc., Engineer and Surveyor to the Council, Town Hall, Southall.

March 6.—**Leicester.**—Materials.—Supply to the B.G., for three months ending June 30, 1916, of building materials. Forms of tenders at the Poor Law Offices, Pocklington's-walk, Leicester.

March 7.—**Batley.**—Materials.—Supply to the T.C. of builders' materials. Forms of tender, etc., from the Borough Engineer, Mr. Oscar J. Kirby, Town Hall, Batley.

March 7.—**Birkenhead.**—Paints, etc.—Supply to the Guardians of Wirral Union of paints, colours, oils, etc. Forms of tender of Mr. J. E. S. Olive, Clerk, 54, Hamilton-street, Birkenhead.

March 7.—**Coventry.**—Paints, etc.—Supply to the Guardians of Coventry Union of paints and plumbers' sundries and engineers' oils. Form of tender of Mr. A. E. Evans, Clerk to the Guardians, Union Offices, 13, Little Park-street, Coventry.

March 7.—**Salford.**—Materials.—Supply to the County Borough of Salford of builders' materials. Particulars from Borough Engineer, Town Hall, Salford.

March 7.—**Shoreham-by-Sea.**—Painters' Materials.—Supply to the Guardians of Steyning Union of painters' materials for six months. Forms of tender of Mr Arthur Flowers, Clerk to the Guardians, Union Offices, Shoreham-by-Sea, Sussex.

March 8.—**Richmond (Ireland).**—Materials.—Supply to the Joint Committee of Management of Richmond Asylum and Portrane Asylum of building materials, etc. Forms of tender from the Storekeeper, Richmond Asylum, Grangegorman.

March 9.—**Brentwood.**—Materials.—Supply to the Committee of Visitors of Brentwood Asylum, Brentwood, Essex, of builders' materials for three months, dated March 1, 1916. Forms of tender of Mr. W. H. Roscoe, Clerk of the Asylum, Brentwood.

March 9.—**Dover.**—Materials.—Supply to the Dover Harbour Board of builders' materials for three or six or twelve months from March 31, 1916. Schedules and conditions of contract, on payment of 2s. 6d., from Mr. Martyn Mowll, Register of Dover Harbour Board, Castle-street, Dover.

March 9.—**Woolwich.**—Materials.—Supply to the Guardians of the Woolwich Union, for three months commencing April 1, 1916, of builders' materials. Forms of tender at the Clerk's Offices, Union Workhouse, Plumstead.

March 10.—**London.**—Materials.—Supply to the East Ham Corporation of builders' materials. Forms of tender, etc., of Mr. C. Eustace Wilson, Town Clerk, Town Hall, East Ham, E.

March 11.—**Heston and Isleworth.**—Materials.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Forms of tender from Mr. J. G. Carey, Surveyor, Council House, Hounslow, W.

March 11.—**Rotherham.**—Materials.—Supply to the Corporation of builders' materials during the year ending March 31, 1917. Specifications, etc., of Mr. T. P. Collinge, A.M.Inst.C.E., Borough Engineer, Town Hall, Rotherham.

March 13.—**Colne.**—Materials.—Supply to the Highways and Sewerage Committee of builders' materials for the year ending March 31, 1917. Specification, etc., of the Borough Surveyor, Mr. T. H. Hartley, Town Hall, Colne, Lancs.

* March 13.—**London.**—Various Materials, etc.—The City Lands Committee of the Corporation of London invite tenders for supply of certain materials, etc.

March 13.—**Stockport.**—Paint.—Supply to the Guardians of Stockport Union of paint, etc., for a period of six months from April 1 next. Forms of tender of Mr. Charles F. Johnson, Clerk to the Guardians, Union Offices, Shaw Heath, Stockport.

March 13.—**Walsall.**—Materials.—Supply to the R.D.C. of builders' materials from April 1, 1916, to March 31, 1917. Forms of tender of Mr. W. P. Young, District Surveyor, Council Offices, Daw-end, Rushall, Walsall.

March 14.—**Brentford.**—Materials.—Supply to the Guardians for a period of six months of builders' materials. Forms of tender, etc., of Mr. F. E. Harmsworth, Clerk to the Guardians, Union Offices, Isleworth, Middlesex.

March 14.—**Croydon.**—Materials.—Supply to Guardians of Croydon Union of builders' materials. Tender forms of Mr. Harry List, Clerk to the Guardians, Union Offices, Mayday-road, Thornton Heath, Surrey.

March 15.—**Exeter.**—Materials.—Supply to the City Council of builders' materials for twelve months. Forms of tender, etc., from the City Surveyor, Municipal Offices, Exeter.

March 16.—**Larbert.**—Materials.—Supply to the Stirling District Asylum, Larbert, of builders' materials for three, six, and twelve months as from April 15, 1916. Forms of tender, etc., of the Subscriber.

March 18.—**Heywood.**—Materials.—Suppl the Corporation of builders' materials for t months. Specifications, etc., of Mr. J. Nuttall, Borough Surveyor.

March 18.—**Sheffield.**—Oils and Pai Supply to the Guardians of Ecclesall Bi Union of oil and paints. Tender forms of J. E. Moulding, Clerk to the Guardians, U Offices, The Edge, Sheffield.

March 20.—**Kent.**—Materials.—Supply t Asylums Committee of the County of Ke builders' materials. Mr. Francis R. Ho Clerk to the Committee, 9a, King-street, stone.

March 20.—**Lichfield.**—Granite, etc.—Su to the R.D.C. of granite, slag, tools, chipp oils, etc. Forms of tender from Mr. C Rawstron, District Surveyor, Station-road, field.

March 22.—**Long Ashton.**—Timber, Supplying the Workhouse with timber and and colours from March 31 next. Form tender, etc., of Mr. Albert E. Hicks, C Union Office, Flax Bourton.

No Date.—**London.**—Materials.—Suppl the Guardians of Hackney Union of bui materials. Forms of tender, etc., at Guardians' Offices at the Workhouse, 2, Si road, Homerton, N.E.

No Date.—**Sheffield.**—Furnishing.— furnishing the new children's hospital, Ecc Bierlow Union. Particulars of Mr. J. Moulding, Clerk to the Guardians, Union O. The Edge, Sheffield.

ENGINEERING, IRON, AND STEE

March 14.—**St. Albans.**—Sewage Distrib —For the supply, delivery, and erection plete of five revolving distributors at the S Disposal Works, Park-street, near St. Alba the county of Hertford. Specification, et Mr. H. Howard Humphreys, 28, Victoria-s Westminster, Consulting Engineer to the poration. Deposit, £3 3s.

March 20.—**Faversham.**—Oil Engine, Supply to the R.D.C., of a 25 b.h.p oil e and two sets of pumps, etc., for waterwo Boughton, near Faversham, Kent. Spe tion, etc., from the Council's Cons Engineer, Mr. H. Howard Humphreys, 28 toria-street, Westminster.

ROAD, SANITARY, AND WATE WORKS.

March 4.—**Harrow-on-the-Hill.**—Tar. U.D.C. invite tenders for (*a*) the supply of 30,000 gallons of distilled tar; (*b*) tar pa about 40,000 sq. yds. of road surface. Parti from Mr. J. Percy Bennetts, Engineer an veyor to the Council, Council Offices, Har

March 7.—**London.**—Wood Paving.—S ing and laying wood paving along the ca way in Catford-hill, Catford, from Stan road to Beechfield-road, for the Lewisham Form of tender, etc., at the Town Hall, C (Surveyor's Department).

March 7.—**Newmarket.**—Materials.— to the R.D.C. of road materials. Tender of Mr. Fred. J. Blackbourn, Acting Clerk Council, Deva-chambers, Newmarket.

March 8.—**Hartismere.**—Granite. Supply to the R.D.C. of granite and pit Mr. Harold Warnes, Solicitor, Clerk Council, Eye, Suffolk.

March 9.—**Blairgowrie.**—Quarrying, For quarrying, carting, breaking metal, ironmongery, oils, etc., for the District mittee. Schedules of quantities, etc., o George Wyllie, Road Surveyor, Pert Blairgowrie.

Continued on page xvi.

[Those with an asterisk (*) are advertised in this issue.]

workers, builders, dealers in slate, bricks, brick-earth, chalk, sand, etc. Nominal l. £5,000 in 5,000 £1 shares.

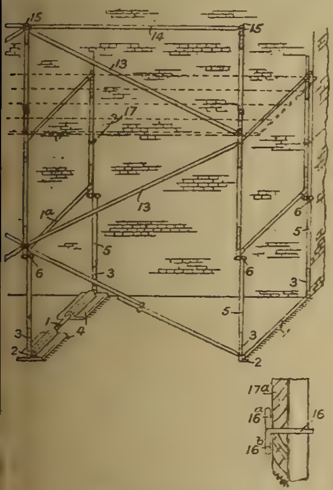
HARD GOULD & Co., LTD. (143,008), 57, -street, Cardiff. Registered February 14. rry on business of builders, contractors, tors, merchants, and dealers in sand, lime, bricks, timber, hardware, and builders' requisites, miners, importers, xporters, electricians, engineers, general ants, etc. Nominal capital, £1,000 in £1 shares.

◆

SELECTED PATENTS.

46 of 1914.—John Parsons, jun., and min Claude Andrew: Scaffolding.

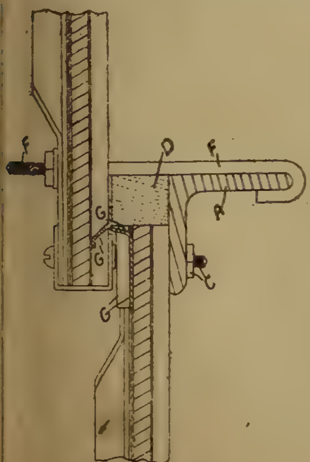
s relates to scaffolding and the like of the comprising metal tubes connected by s, and comprises, in combination, vertical r members 5 connected by dowels, and bars 1, 1ª, oblique stays 13 having eyes gage the dowels, tie-plates 17 secured to all and engaging the vertical members, djustable clamps 6 for the lower vertical blique members to adjust the scaffolding egularities of the ground. The dowels connected to the cross-bars by angle or ts 2, and the lower cross-bars may be ed with self-adjusting feet 4. A guard is secured to the upper members 5 by 5. Platforms may be formed by placing across the bars 1. Material is retained the platforms by boards 17ª held in by clips 16 having holes to receive the l members and formed with bent tongues ". The sections of the scaffolding may ng about the vertical members to conform contour of the building.



15,346 of 1914.

30 of 1914.—Frank Wilford Mellowes erbert Faulston: Glazing roofs.

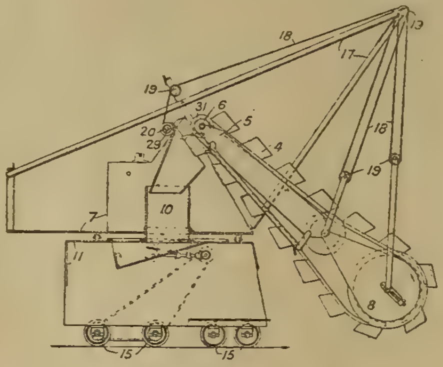
relates to a method of glazing roofs ch overlapping ends of metal glazing- re spaced apart by wood distance-pieces D which rest on the purlins A and may be provided with flashing strips G with flanges G^1 bearing against the underside of the adjacent glass panes. The glazing-bars are secured to the purlins by hooked bolts F, engaging flanges or projections on the lower edge of the purlins, and bolts and nuts C or other known connections.



16,730 of 1914.

19,760 of 1914.—David Thomas: Excavating and like machines.

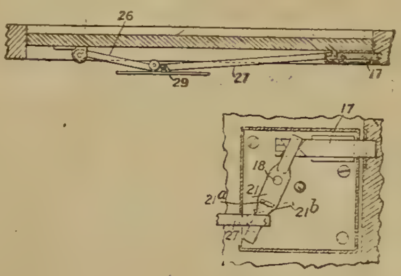
This relates to an excavating, dredging, or quarrying machine having an endless travelling chain of buckets 4 carried by an arm made in two parts 5, 8, pivoted together and supported by a pivot 6 and by tackle 18, which passes over pulleys 19 on a frame of jib 17. The material is discharged through a hollow king-post 10, which forms the connection between the upper carriage 7 supporting the jib and the lower carriage 11 running on wheels 15 and made saddle-shaped so as to pass over a truck, etc., to receive the material. The upper carriage may turn on wheels about the post 10. The gear-wheel 31 for the chain of buckets, and the shaft 29 for the drums 20 to which the lifting-tackle is connected, are both driven from the main shaft by spur and worm gearing. Suitable clutches connect the drums 20 with their shaft.



19,760 of 1914.

19,819 of 1914.—George Henry Stanbridge: Emergency-exit fastenings.

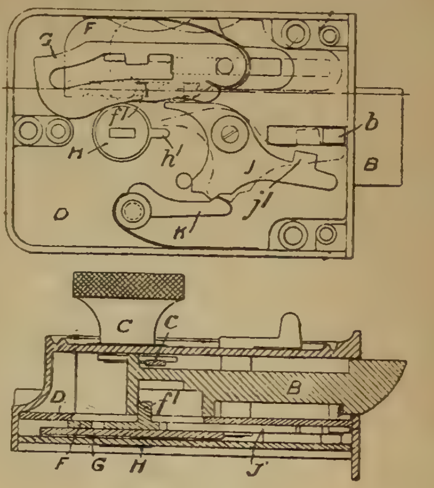
This relates to emergency-exit fastenings in which a sliding bolt 17 is connected by a lever 21 on an intermediate pivot 18 to a toggle linkage 26, 27, so as to be drawn when the linkage is straightened by pressure on the plate 29 at the joint. The arms of the intermediate lever 21 engage flared slots in the bolt and toggle. Ribs 21^a, 21^b on the lever and casing keep the lever in one plane.



19,819 of 1914.

20,061 of 1914.—Charles William Tonks, Enoch Tonks, and George Arthur Tonks (trading as Enoch Tonks & Sons): Door latches.

This relates to a cylinder door latch B for operation from the outside by a key inserted in a cylinder H, through the medium of a runner plate F mounted to slide on a slotted division plate D within the lock casing. The latch is operated from inside by a follower *c* on a handle C, and from outside by a string f^1 on the runner plate F, which is itself operated by an arm h^1 on the cylinder H under the control of the usual lever or levers G. An additional lever J, also operated by the arm h^1, and controlled by a spring-pressed pawl K, serves to lock the latch B, when shot, by a projection j^1 thereon engaging a stump *b* on the latch

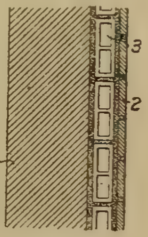


20,061 of 1914.

An ordinary night latch may similarly be adapted as a cylinder latch.

20,463 of 1914.—Wallace Clement Sabine and Rafael Guastavino: Sound-deadening in buildings.

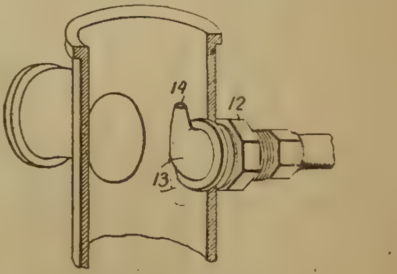
This relates to a sound-absorbing wall or ceiling surface consisting of porous ceramic tiles 2 secured by cement to the main structure 1, with or without the interposition of hollow blocks 3. The pores of the tiles 2 are exposed at the surface. The tiles are formed from clay 25 per cent., vegetable-bearing earth 65 per cent., and a flux such as feldspar 10 per cent., the materials being pulverised and mixed in a slightly moist condition, then screened with a screen having about sixteen meshes to an inch. The powdered material is next pressed in moulds to cause the particles to cohere, and, to prevent the closing of the pores in the pressing, finely pulverised vegetable-bearing earth is sprinkled on the bottom of the mould or on the upper face of the material in the mould, whichever forms the exposed face of the tile. The blanks are then dried and burned in a kiln, the temperature of which is raised gradually to about 2,100 deg. Fahr., and then slowly cooled.



20,463 of 1914.

21,092 of 1914.—August Edward Eilertsen: Flushing drains.

This relates to a nozzle 13 having a constricted outlet 14, and secured in the wall of a soil waste or other drain-pipe by a nut 12. The outer end is adapted for connection to a high-pressure hose-pipe. The nozzle may be turned into the reverse position shown by dotted lines.



21,092 of 1914.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to THE BUILDER LTD., and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BRAINTREE.—For laying about 521 yds. of 9-in. glazed stoneware sewer at Church-street, Bocking, and the construction of necessary manholes, etc., for the Braintree Rural District Council. Messrs. E. H. and C. V. Bright, Surveyors, 17, Railway-street, Braintree :—

T. W. Peddret	£509	10
Thurman, Ltd.	452	0
Emery & Co.	430	0
A. Brown & Son	411	0
W. Ketley	366	0
May, Mortimer, & Co.	350	0
Davey & Armitage	350	0
H. C. Pullar & Co.	265	0

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BRITTAS (Dublin).—For painting, etc., at Crooksling Sanatorium, for the Tuberculosis Committee of the Dublin Corporation :—

O. Neill & Son	£827	0
Dockrell, Sons, & Co.	600	0
Keatinge & Son, Ltd.	542	10
Municipal Workshops, Dublin*	456	0

CORK.—Supplying and fixing a boiler at the asylum, for the Cork Lunatic Asylum Board :—

R. Merrick	£95
Musgrave & Co., Ltd., Belfast*	86

LONDON.—For erection of business premises at Mitcham-road, Tooting, S.W., for Mr. S. Frost. Messrs. Briant & Son, surveyors, 200, Kennington Park-road, S.E. :—

Limpus & Son*	£1,296

LONDON.—For additional mess-room for nurses, for the Lewisham Board of Guardians :—

Finch & Finch, 84, Springbank-road, Hither Green, S.E.*	£885	10

MULLINGAR.—For the construction of a sewer and necessary connections thereto at the Mullingar District Lunatic Asylum, for the Committee of Management, District Lunatic Asylum, Mullingar. Messrs. Doyle & O'Loughlin, civil engineers, Church-street, Athlone :—

H. C. McNally & Co.	£3,218	0	0
R. Mullally	2,823	7	0
J. Ross & Ross	2,711	6	10
J. Ryan & Son	1,887	0	0
Grainger Bros.	1,859	0	0
J. Graham, Dromore, Co. Down*	1,595	0	0
J. Kearney	1,550	0	0

SPENNYMOOR.—For laying a 12-in. storm-water overflow drain and storm-water chamber in High-street, Spennymoor, for the Urban District Council. Mr. C. R. Spencer, Engineer and Surveyor to the Council, Town Hall, Spennymoor :—

G. Bell & Son, Ltd.	£99	2
F. Sowerby	66	10
T. Wilson, School House, Low Spennymoor*	57	15

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WHITLEY BAY.—For painting and decorat the interior of the Council Offices and caretake house, Council Buildings, Whitley Bay, for Whitley and Monkseaton Urban District Coun Mr. A. J. Rousell, A.M.Inst.C.E., Surveyor, Cour Offices, Whitley Bay :—

Stevenson Bros.	£87	0	0
F. Connell	81	15	0
J. Burdon, Ltd.	54	17	6
J. Barley, Whitley Bay*	58	10	0

* Accepted for caretaker's house only, £15 10

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TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIR from the Office to residents in any part of the United King at the prepaid rate of 19s. per annum, with delivery *by F Morning's Post* in London and its suburbs.

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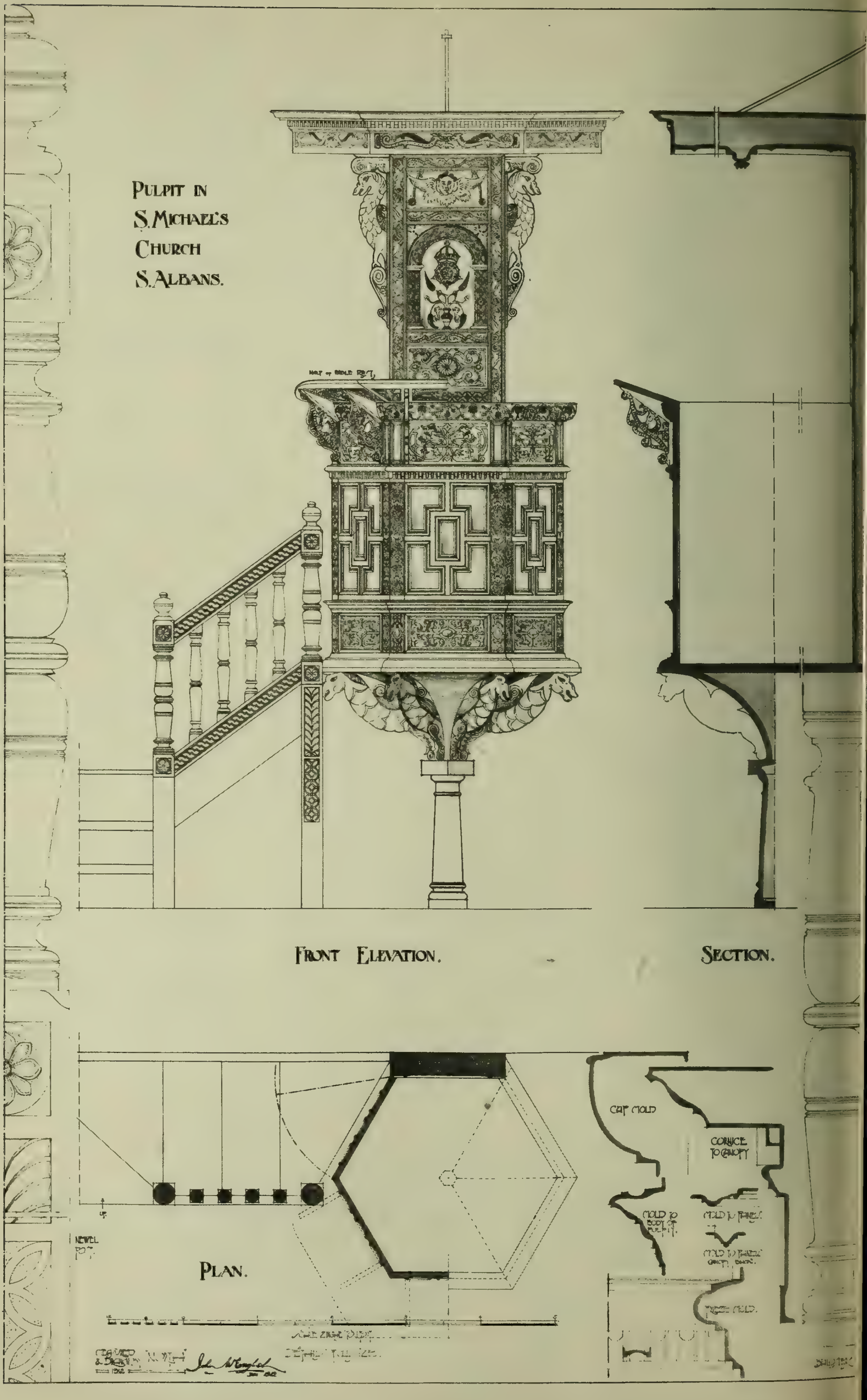
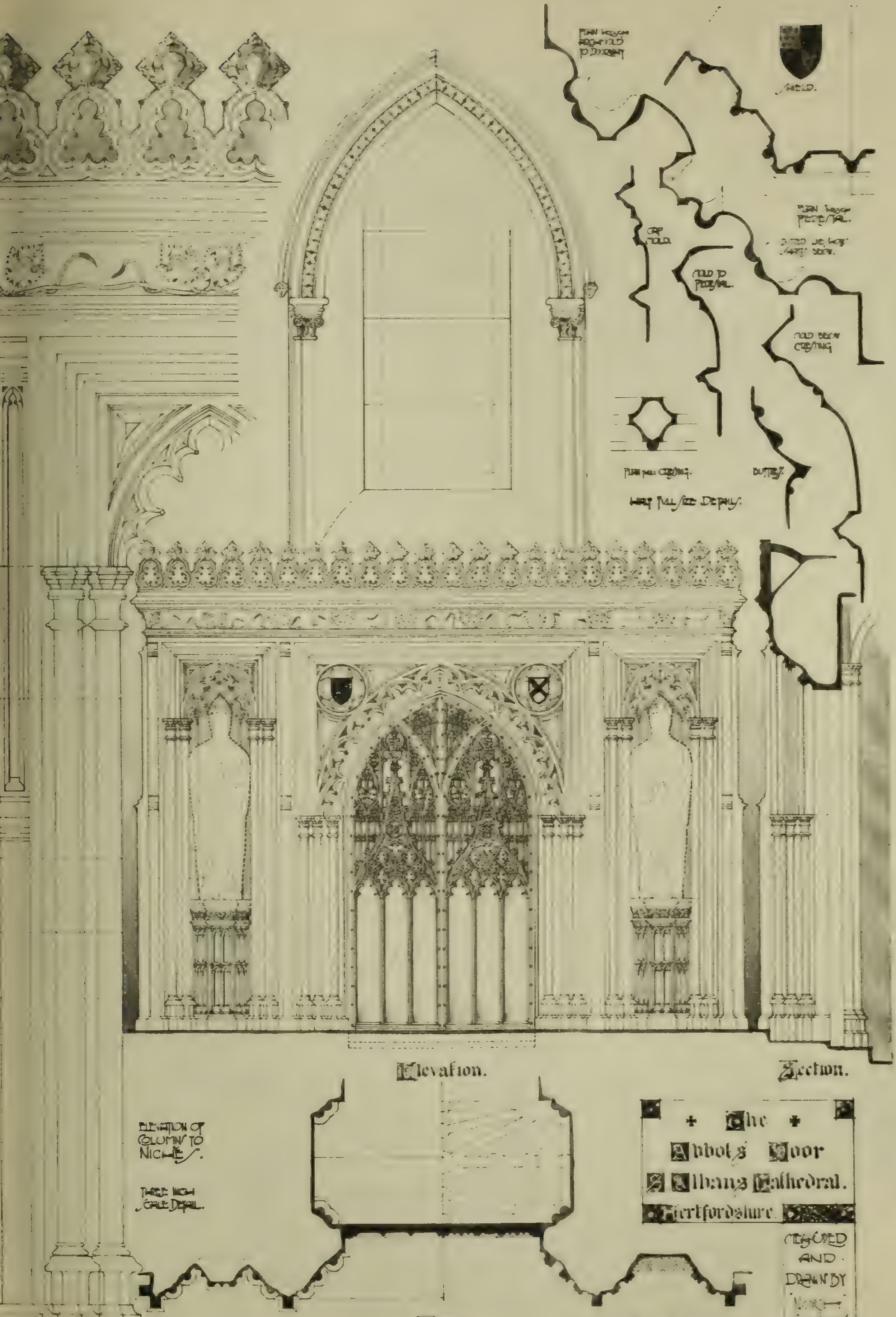
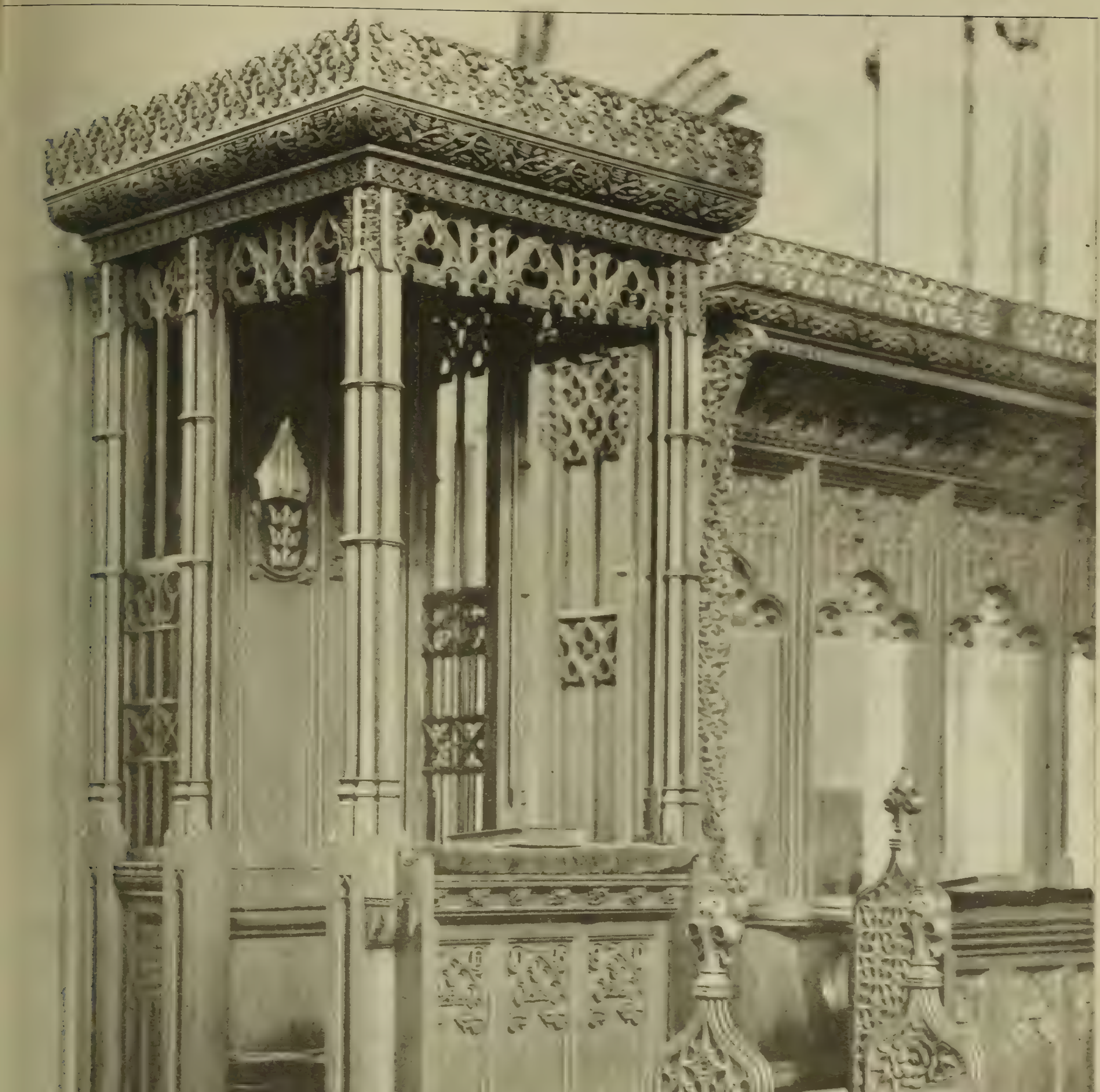


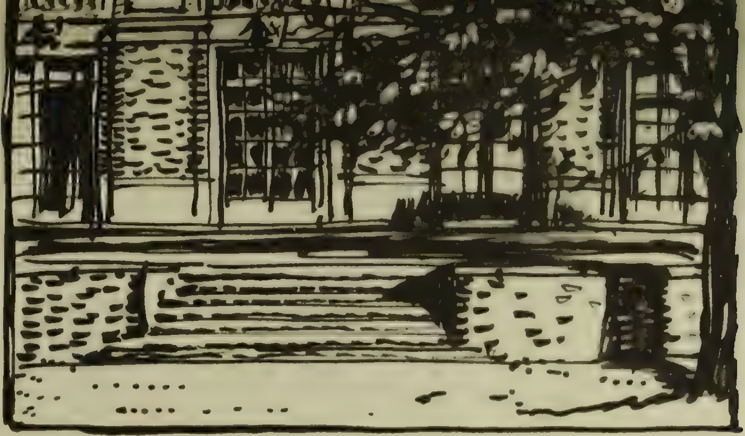
PULPIT IN St. MICHAEL'S CHURCH, St. ALBANS.—Measured and Drawn by Mr. John W. English.



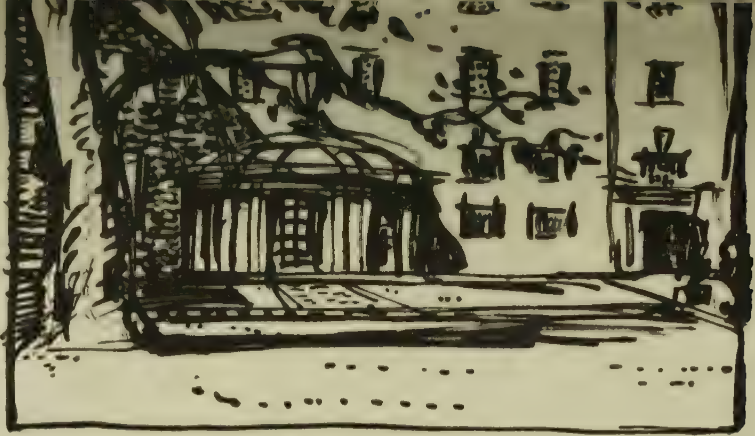
THE ABBOT'S DOOR, ST. ALBANS CATHEDRAL, HERTFORDSHIRE.—MEASURED AND DRAWN BY MR. JOHN W. ENGLISH.



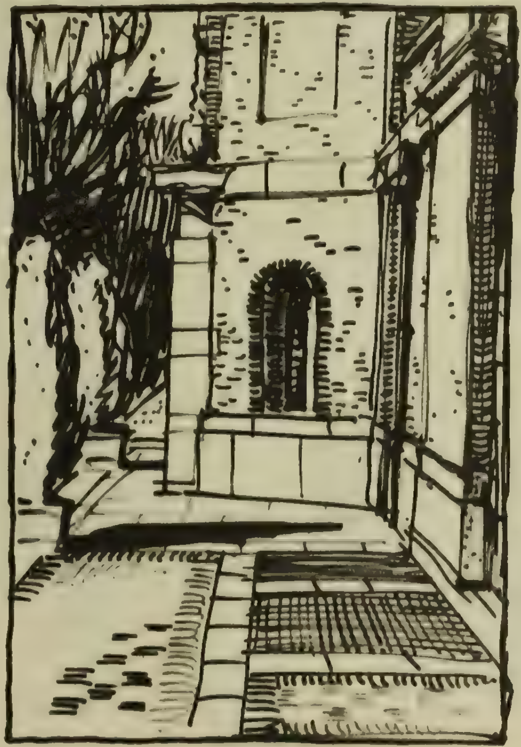
THE NEW THRONE, BRISTOL CATHEDRAL.—MR. ROLAND PAUL, F.S.A., ARCHITECT.



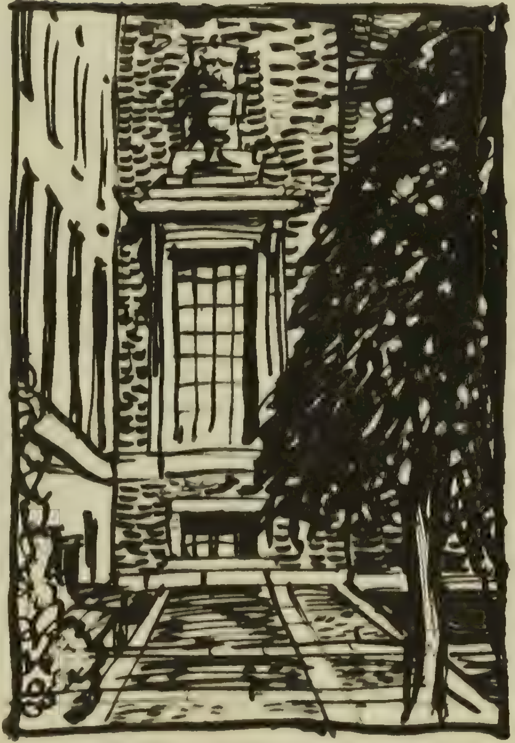
South Side of Refectory.



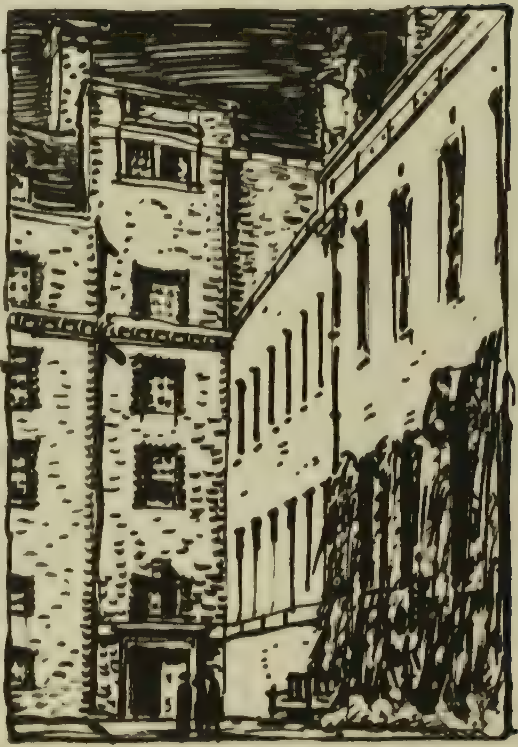
West End of Quadrangle.



Refectory Terrace.

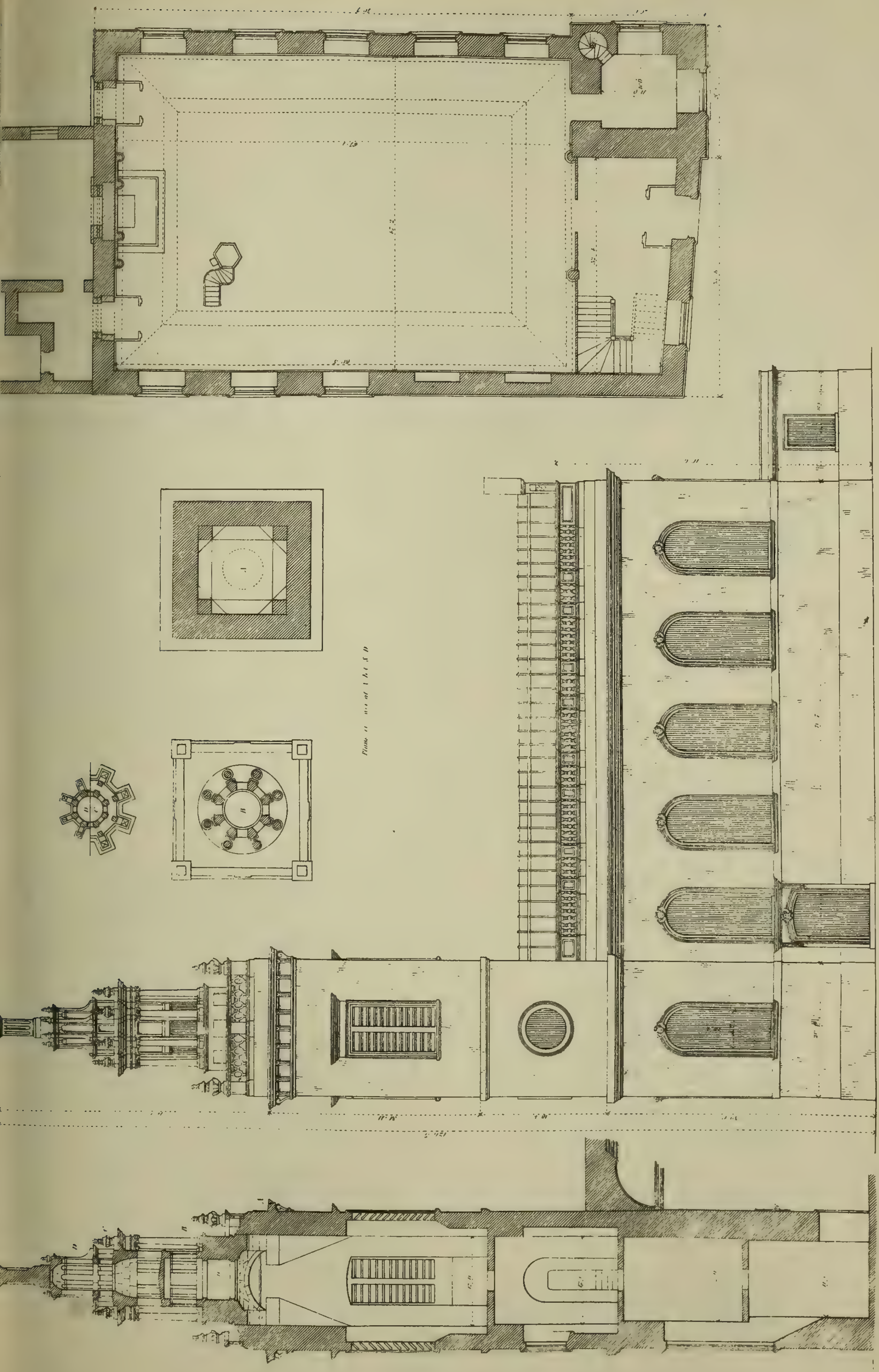


Window of Laboratory Staircase.

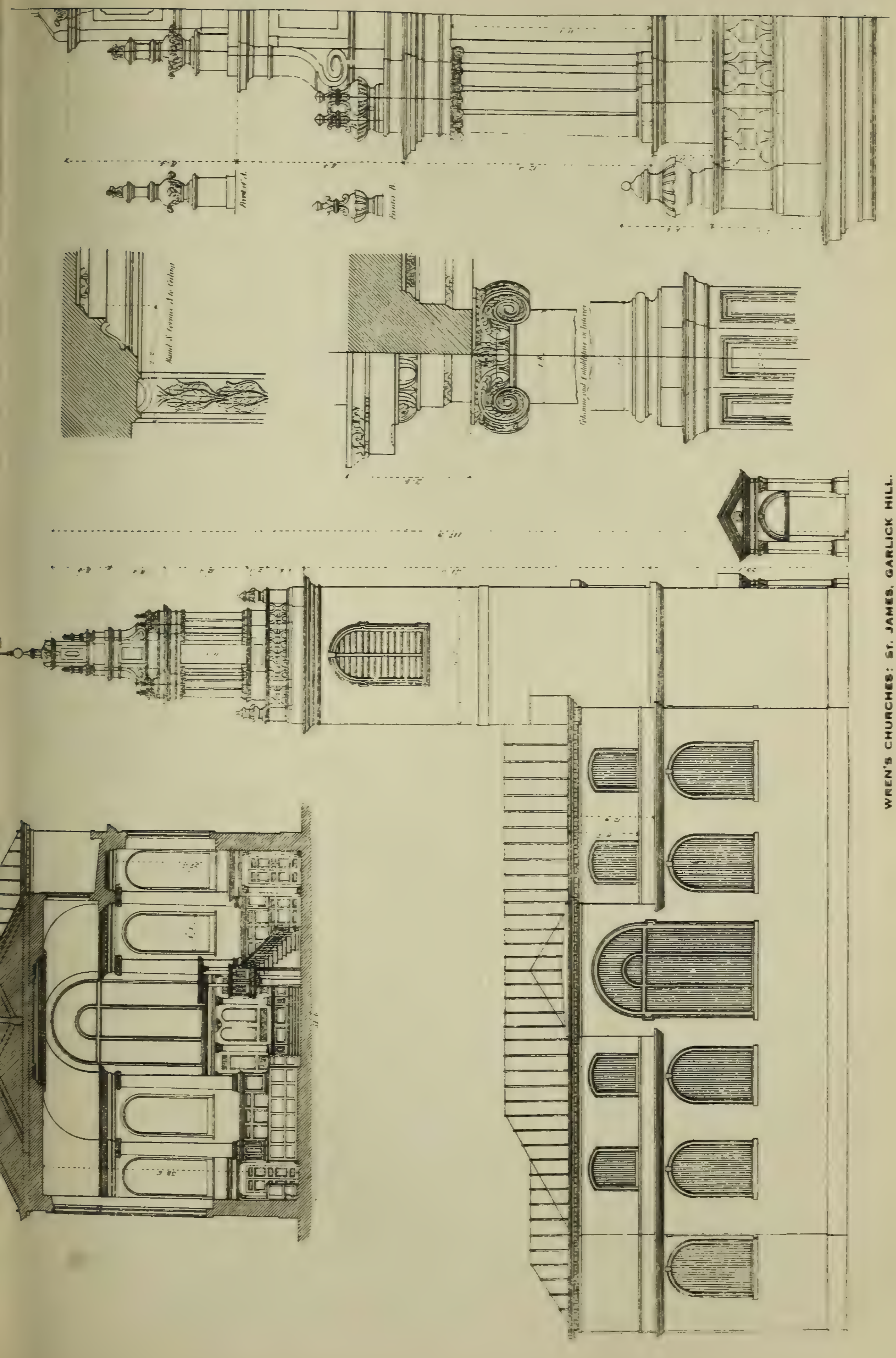


Entrance to Laboratories.

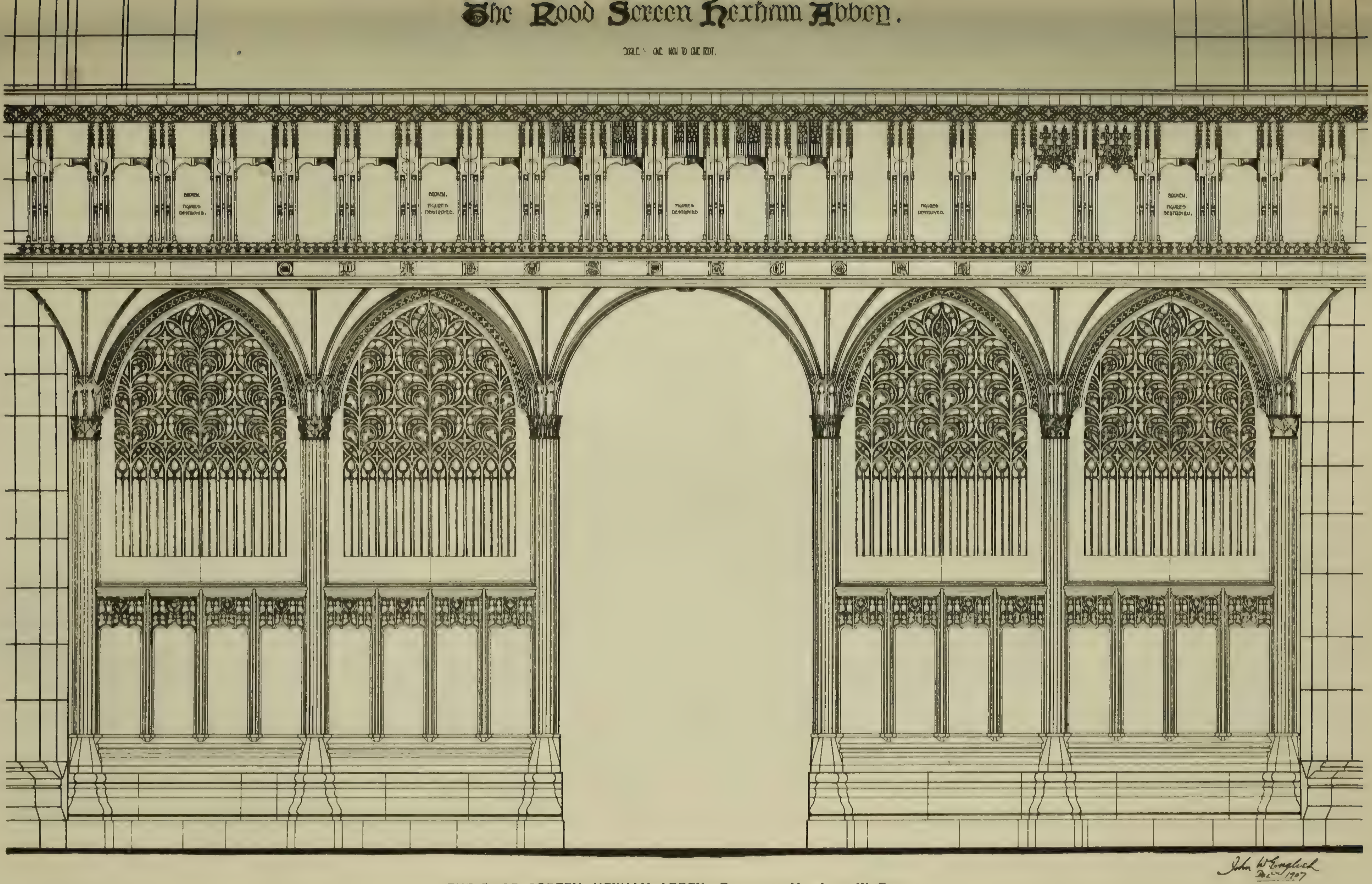
UNIVERSITY OF LONDON: KING'S COLLEGE FOR WOMEN.—"Impressions," by Mr. Charles Holden, A.R.I.B.A.



WREN'S CHURCHES: ST. MICHAEL'S, COLLEGE HILL.



WREN'S CHURCHES: ST. JAMES, GARLICK HILL.


The Rood Screen Hexham Abbey.
SCALE : ONE INCH TO ONE FOOT.
BROKEN. FIGURES DESTROYED.
BROKEN. FIGURES DESTROYED.
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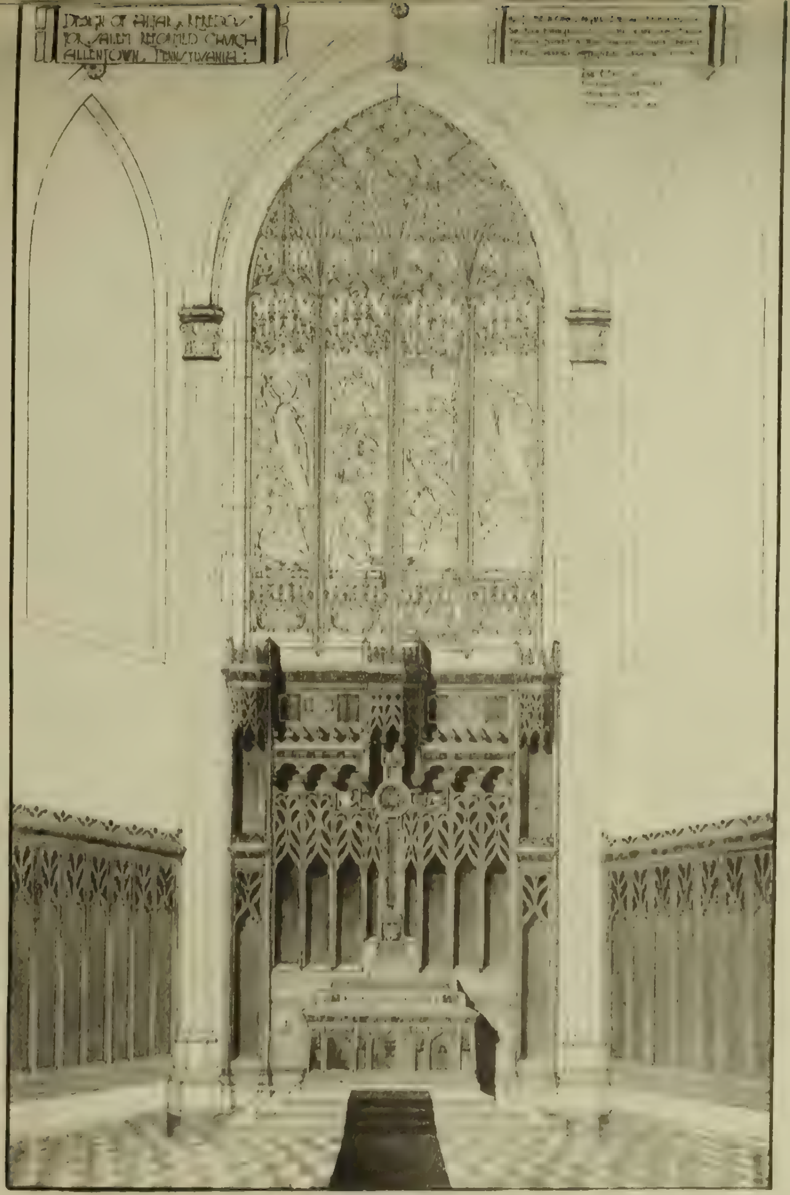
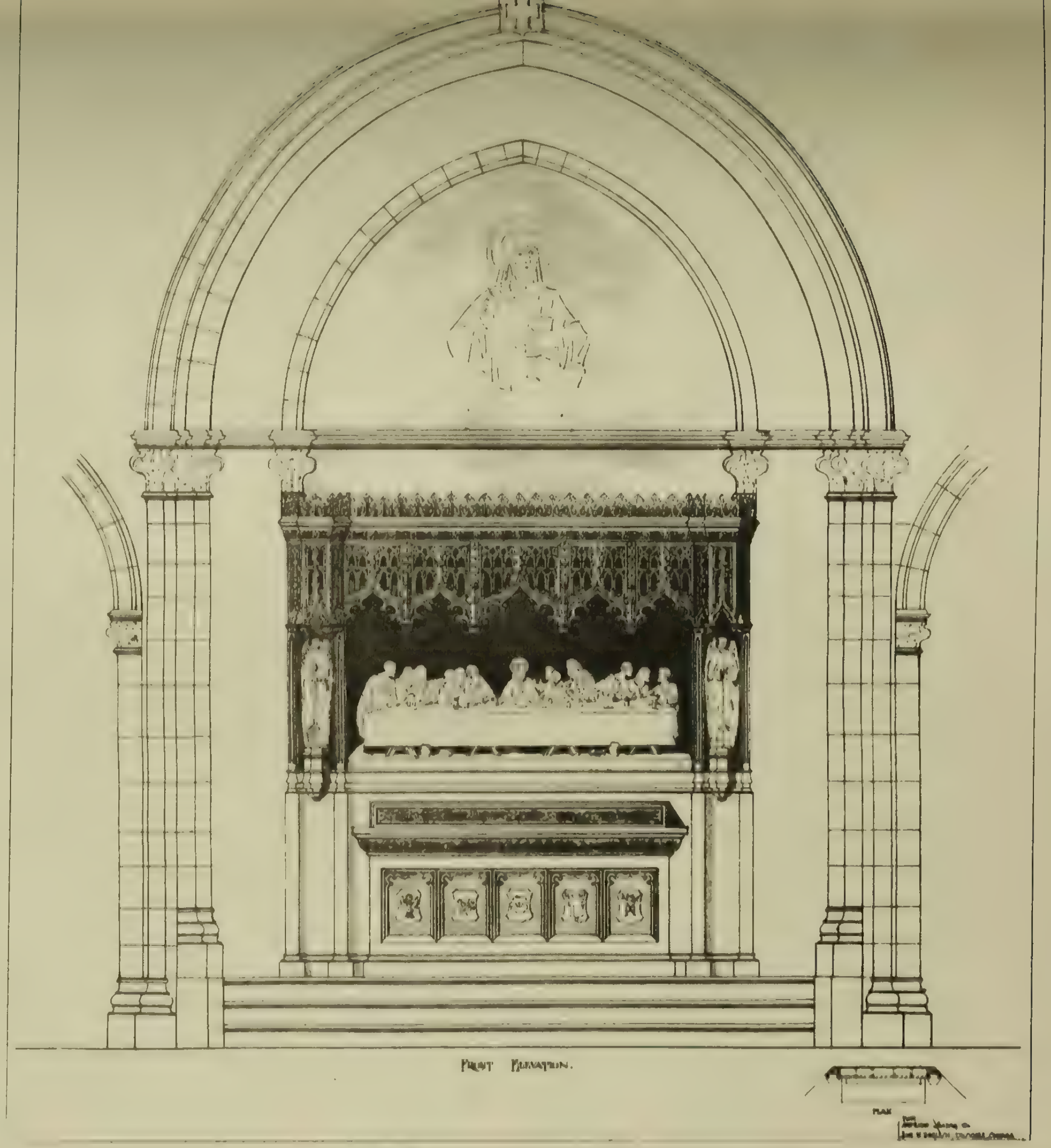
BROKEN. FIGURES DESTROYED.
John W English Dec 1907

THE ROOD SCREEN, HEXHAM ABBEY.—DRAWN BY MR. JOHN W. ENGLISH.


DESIGN OF ALTAR & REREDOS FOR SALEM REFORMED CHURCH ALLENTOWN, PENNSYLVANIA:

ALTAR AND REREDOS, SALEM REFORMED CHURCH, ALLENTOWN, P.A., U.S.A.

MR. JOHN W. ENGLISH, ARCHITECT.



ALTAR AND REREDOS, REFORMED CHURCH, READING, P.A., U.S.A.

MR. JOHN W. ENGLISH, ARCHITECT.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

L. CX.—No. 3814. MARCH 10, 1916.

THE EFFECT OF BUILDINGS UPON CHARACTER.

THIS is a large subject, and one at first sight too absurd or too abstruse for argument, but, now that historians are beginning to take account of social environment, a brief consideration of some of the obvious facts may not be uninteresting.

here is no more commonly received belief, especially e South of England, than that the dweller in the North urdy, rugged, and of superior virtue. The hope was tless helped by the eighteenth-century reformer's und belief in the superior simplicity and virtue to be among the inhabitants of a hilly country. Switzerland of course, the most conspicuous example, but there are s nearer home, such as the novelist Amory's enthusiasm e virtues of Richmondshire farmers and Peacock's admira- of the pastoral simplicity prevailing among the Welsh tains. It is not too much to say, however, that the ession is felt, more or less consciously, by every traveller gh the northern counties, and is in great measure due to ffect produced by stone walls in place of hedges, stone es in place of brick. These houses are altogether different aracter from the exquisite stone-built farms of Oxfordshire Gloucester, which suggest an atmosphere of home and e such as hardly can be found elsewhere. The stone of North is grim and grey, not toned with hues of yellow silver, but as severe and cold after a hundred years as after nth of builded life. The North, too, does not love gardens, this adds to the severity of the effect: clearly this people o need of outward pleasures, it has enough in itself and s hills. And this is true. The rugged stone is only a ol of the rugged character, and no reader of the lives of lotte and Emily Brontë will feel that the grey houses e North were without their influence on those lovers of moors.

he Kent or Surrey cottage, nestling red-roofed in its trees, symbol not only to us but to the world of the wealth and e and happiness of England. It stands for centuries ttled peace; it is picturesque, and its beauty is increased e charm of garden and creeper and the fruitful background rchard or hops. So, too, the golden stone of Somerset well the mellow character of the countryside, the warm ts of the country folk and the soft western speech.

odern historians of the classical world are beginning to dwell he contrasting influences of the glorious temples and small squalid houses even of Greek cities, and of Athens herself, he combination of vast blocks of flats, piled with truly an confusion and disregard of sanitary laws in the poorer ters of Rome with the exquisite villas and gardens of wealthy; and it is scarcely unfair to see in Calcutta, with arrens of native quarters and its palaces of Chowringhee, odern parallel to ancient Rome. Of the effects of mud or led huts, such as were almost universal in the remoter s of agricultural Ireland before the Famine and in ent Egypt, it is needless to say much; apart from the al result in the narrower sense of the word, character ound to be affected by the fact that houses can be built out effort, replaced with little toil; when it is not th while taking trouble over what is so little permanent ill not be worth while to do anything save under compulsion, pt in the easiest way possible, and the qualities of enter- e, thrift, and exertion will die for want of nourishment. ay be a false impression, but it is one not easy to shake off, if Barnwell were not built of the cheapest whitish-yellow k and roofed with the poorest slate the authorities of bridge would have less to contend against, and it is freely itted that the outward hideousness of the packed colliery ge is directly responsible for much of the evil of colliery life.

No one who knows anything of the life of a cathedral town, whether in England or abroad, is ignorant of the moral effect of one grand building in a place otherwise perhaps destitute of beauty. There is the conscious pride which shows itself in the ready direction of the stranger; there is the unconscious standard set up in the mind by which other buildings will be judged in future years. Yet "beauty is in the eye of the beholder," and the grim houses of the dales will be as dear to those who love them as any Italian palace to its heirs, if only they are set in places that call out love. The solitary farm in Mossdale or Cotterdale will inspire a passion of love that the southerner may not always feel for his fairer and softer land.

This instinctive love of a house, a district, a country, is one that under certain conditions is too easily lost, and its loss is one of the saddest and most constant features of modern industrialism. Unfortunately it remains to be proved whether the Garden City, so incomparably better in other ways, can supply the loss and counteract the inveterate habit of moving their quarters so dear to the working classes, whose "sticks," and not whose habitation, are home. Nor can it be doubted that the growth of flats is against the recovery of the home instinct. As far as sentiment goes, one flat is as good as another, and the type of building with common lifts and staircases is not one to influence character in any positive way, at least in modern England. Every poster of every cheap land company points the moral that the Englishman's home is a house, and, this being so, it is clear that the English character, among all who can exercise a free choice, still demands a house of its own—that is, it recognises the effect of even private buildings upon character.

The first part of the Report of the Departmental Committee on Land Settlement for Soldiers and Sailors, issued on February 8, aims at the revival of this instinct on a large scale. That the creation of a true rural population is the most urgent social need of the day few will deny, but whether the proposed scheme of tenancy as against ownership is the right one is at best doubtful. Cottage and farm are rarely home unless the man who lives in them is owner or what we may call hereditary tenant under a great landowner, and when the Committee alleges in one place that their chosen system is desirable because the tenant is practically sure of permanency in his holding, and in another that it is desirable because, if unsatisfactory, he can easily be got rid of, it arouses the suspicion that a plan combining such very opposite advantages might in practice prove to have neither. Be this as it may, let us hope that at all costs the standardised cottage will be avoided when the scheme takes effect, and this can only be secured by insisting on the supervision of plans by an architect of standing in every district to ensure some regard to the style of material prevalent in that district, and thus ensuring that the cottages of the new settlers are not only watertight but humble and therefore home.

Great public buildings are the expression of a great nation, their loss is the world's; if the Hôtel de Ville, the Palais de Justice, Ste Gudule are doomed to share the fate of Louvain and of Reims, the world will feel for Brussels as she feels for the other victims of German culture, and will plan an empty and impotent revenge in the erection at German cost of other buildings to take their place when the final reckoning shall come. But the world will be the poorer, and one of the consoling lessons of the war is to be drawn from the universal cry that the spirit embodied in the lost buildings is greater than the might of arms, that the best part of the world's inheritance is the visible legacy of the past. And what is this but the recognition of our subject, the effect of buildings upon character?

NOTES.

The First Atelier Exhibition. Owing to the fact that so many of the working members of the Atelier are absent on military duty, it was thought advisable to discontinue the ordinary monthly exhibitions and to hold them once in every two months, so as to ensure a more interesting exhibition. The last exhibition and criticism, held on February 23, fully justified this policy. Quite a large show was the result, and, what is even more satisfactory, the more important designs were of an unusually high standard. The first monthly *projet* was a group of almshouses in the country with accommodation for both sexes. In this competition a "mention" was won by Mr. L. H. Bucknell for a very pleasing group of buildings arranged round a central court. The subject of the second *projet* was a universal store situated on an island site in the shopping centre of a large town. Here Mr. Bucknell did even better, obtaining the unusual distinction of a "first mention" for an excellent design in which the main essentials of the problem had been thoroughly grasped and worked out in a direct and straightforward manner. The result was a building of much character and charm. Mr. Tomlin also obtained a "mention" in this competition. The twelve-hour subjects did not attain so high a standard as the monthly *projets*, but Mr. Meldrum was awarded a "mention" for a design for the treatment of a retaining wall and staircases supporting and connecting the upper and lower terraces in a public park. The Patron, Mr. A. J. Davis, introduced a new feature into the proceedings by giving some general remarks on the subject under discussion before criticising each design in detail. A very pleasant evening was participated in by several friends of the members, including Mr. C. F. A. Voysey and Captain Bennett Goldney, M.P.

Carpenters' Hall Lectures. On February 1 Mr. MacColl, LL.D., the Keeper of the Wallace Collection, gave a most admirable lecture on the "Work and Life of Alfred Stevens," illustrated by lantern slides and by some of Stevens's original drawings, two of which we hope to reproduce shortly. Stevens was one of those great artists who make one regret the shortness of human life, for he spent years in preparing himself for coping with great problems, and died before he had accomplished enough to show the world how great an artist was in their midst. Even his greatest work, the Wellington Memorial in St. Paul's, was completed some years after his death, and, although he was recognised in his lifetime as an artist of rare gifts by a few, he did not live to reap the rewards to which he was justly entitled. The lecturer drew attention to the fact that when the competition for the memorial was held Stevens only received the sixth place, and it was not until the various schemes had been carefully examined that it was discovered most of them would not suit the intended position. Stevens had carefully designed his scheme so that it would be fittingly framed by the arch over, and it was due to this fact more than the recognition by the jury of the intrinsic merit of his work that he secured the commission. Stevens's training, like that of the artists of the Renaissance, had fitted him to cope with problems of art in every branch, and he was more closely connected with them in sympathy and knowledge than with the lesser men of his own age.

Criticism Again. A correspondent tells us that the critic who discourses on the failure of the decorative scheme of St. Andrew's Chapel is justified because his name evidently begins with "K." Neither this letter nor "M.P." nor any other combination of letters seems to us to justify anyone in likening the work of Mr. Weir to the decoration of a bath-room. Whatever the eminence of the critic may be, such remarks savour of abuse and are in bad taste. Our critic objects to Mr. Weir's scheme because the marbles which cover the lower portions of the wall are too light in tone and too cold in colour for the mosaics above, and, although we do not agree with him, his views express genuine and legitimate criticism. But, whether Mr. Weir's work satisfies competent critics or not, a fair-minded man would admit that there is abundant evidence of scholarly refinement and knowledge which cannot be associated with the decoration of a bath-room or underground convenience! We doubt whether many are really in sympathy with the use of either marble or mosaic in a decorative scheme, which are associated in our mind with the environment of southern lands, and we have little doubt that in the minds of many there is a prejudice against the use of marble except in climates bathed with sunlight and warmth. Those who feel this—and we sympathise with them—would rather see the brickwork of the church left as it is and decoration applied in the form of pictures and hangings. But such was not Bentley's scheme, which was to design a church that appeals to many as somewhat of an exotic on English soil. We are conscious of this exotic quality when we see any part of the church completely decorated, and we believe it to be this rather than the failure of decoration *per se* which leaves so many dissatisfied. Marble is an unsuitable material in this climate; it suggests coldness, its surface becomes covered with condensation in our climate, and it needs a bright clear atmosphere to be really effective. Bentley lived we might have been justified in wishing that he designed a building the decorative scheme of which depended ne on marble nor mosaic. The form in which coloured decoration c used in its full magnificence will remain as it was in past a coloured glass framed in a uniform setting of masonry or brick

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Anzac-on-Sea. We may be sceptical, and if events prove us wrong we shall at once acknowledge it, but, th the promoters of Anzac-on-Sea have given thought to the discovery of a name which would charm, we d whether those who hold property in Brighton or Hastings ne try to dispose of it yet. The fortunate owners of plots seem ha satisfy; we should have thought that a deposit of a few gu for a title to their property was the merest bagatelle, to be forg in dreams of ecstasy over the thought that they had freehold in the new resort, but they appear to be sordid and ca individuals, possessing no idealism or enthusiasm. In fact, have disobeyed the injunctions of Holy Writ, for, having put their to the plough of inspiration to invent a fitting title, they have lo backwards and thought of their petty deposits. We shall ho be able to announce that the syndicate is going to hold a compet for the laying out and beautification of the coming seaside resor we trust the cupidity of the speculator will not be allowed to the attractions of Anzac-on-Sea, and that the promoters wil find themselves at sea in their calculations.

[Photo: Geo. Trotma

Wren's Churches: St. Lawrence Jewry.

E LONDON CHURCHES F WREN AND LATER RCHITECTS OF THE ENAISSANCE.

No. XIX.—St. Lawrence Jewry.

church of St. Lawrence Jewry occupies ral position in the City of London, fronting ng-street, Gresham-street, and Guildhall- The name "Jewry" recalls the fact that strict was occupied by the Jews in mediæval prior to their expulsion by Edward I., he position of one of the boundaries of wish settlement is still recalled by the Old Jewry.

he former church many eminent citizens buried, including Richard Rich, from were descended the Earls of Warwick olland; Sir Geoffry Boleyn, who was Lord and the ancestor of Queen Elizabeth; ir Richard Gresham, as well as Dame Avenon, who was married three times, to Sir Alexander Avenon, Lord in 1569. The Lord Mayor and Cor- n attend a service in the church lly on Michaelmas Day before proceeding election of the Lord Mayor for the coming

present church was built in 1671, but was mpleted till 1680; it cost over £11,870, one of the largest and most important Wren's work. It contains a nave and one he greater portion of which was converted large choir vestry a century ago. It is oped that at some future date the whole space may be again thrown into the the architectural effect of which would atly enhanced thereby. Internally, the is one of those finished with a flat ceiling, d by ribs, the cove round it being groined the clerestory windows. Beneath this ange of semicircular-headed windows, n which are Corinthian pilasters.

design is commonplace, but, owing to an lly fine organ gallery and door-cases, the internal effect is rich and pleasing, though greatly marred by glass of poor design and colour. The reredos constitutes a blot on the church, and is an example of the damage effected by the use of absolutely incongruous detail.

The vestry is a beautiful room, panelled in oak, with an interesting chimneypiece, and two very fine door-cases, as well as an enriched ceiling, painted by Sir John Thornhill.

Externally the church is treated in a more monumental manner than most of Wren's churches, especially the east end fronting on King-street, with its engaged columns and pilasters. The other fronts of the church are simpler, the lead-covered steeple carrying out the general effect of vigour and masculinity that distinguish the church, which is suggestive of the best work subsequent to Wren rather than characteristic of his work. The living is in the gift of the Master and Fellows of Balliol College.

No. XX.—St. Magnus, London Bridge.

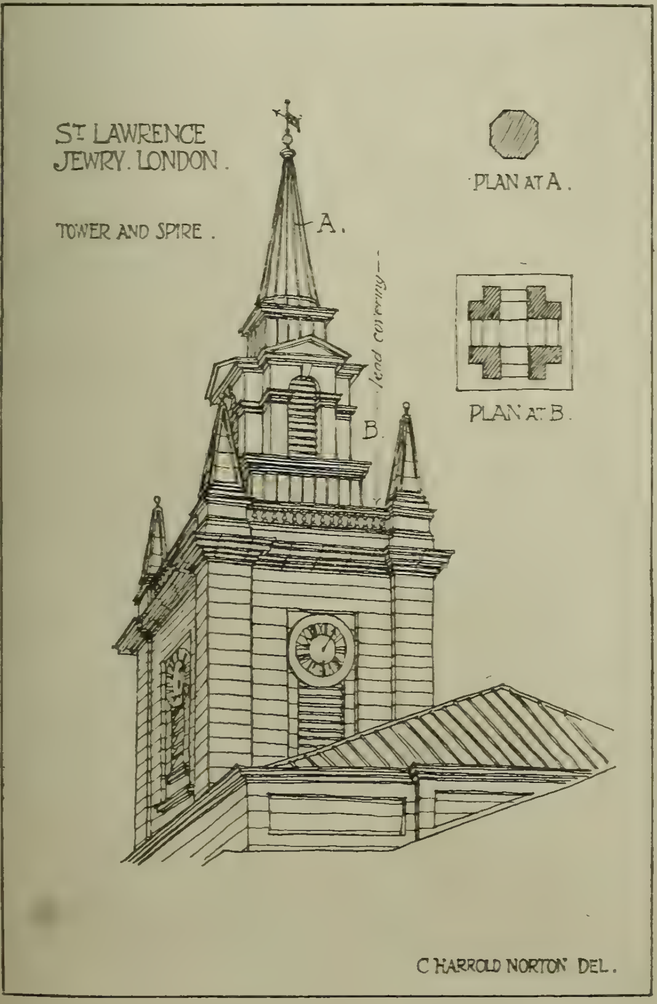
The church of St. Magnus the Martyr is situated on the south side of Thames-street, below the level of the north approach to London Bridge. The church of St. Margaret, New Fish-street, was not rebuilt after the Fire, and its site was utilised for the building of the Monument, its parish being united with that of St. Magnus.

Miles Coverdale, who translated the Scriptures, was a rector of St. Magnus from 1563-1566, and among those buried there was Henry Yeuele or de Yeverley, who was Master Mason to Edward III., Richard II., and Henry IV., and was employed by Richard at Westminster Hall.

The present church was completed in 1676, but the steeple was only added in 1705, a fact which probably accounts for its design, which is unlike most of Wren's work and inferior to it. The domed steeple is reminiscent of the work of Archer and other later architects, lacking the charm and dignity of most of Wren's compositions.

The external treatment of the church is dignified and pleasing, but internally it is one of the barest and least pleasing of the architect's interiors; nor does there seem to be any adequate reason for the singular and unusual irregular spacing of the columns on plan. The staircases leading up to the west gallery are good examples of contemporary woodwork.

The church of St. Michael, Crooked-lane, was pulled down to make room for the approaches to new London Bridge in 1831, and its parish united to that of St. Magnus. St. Michael being one of the "Peculiars" of the Archbishop of Canterbury, the united living is now presented alternately by the Archbishop of Canterbury and the Bishop of London.



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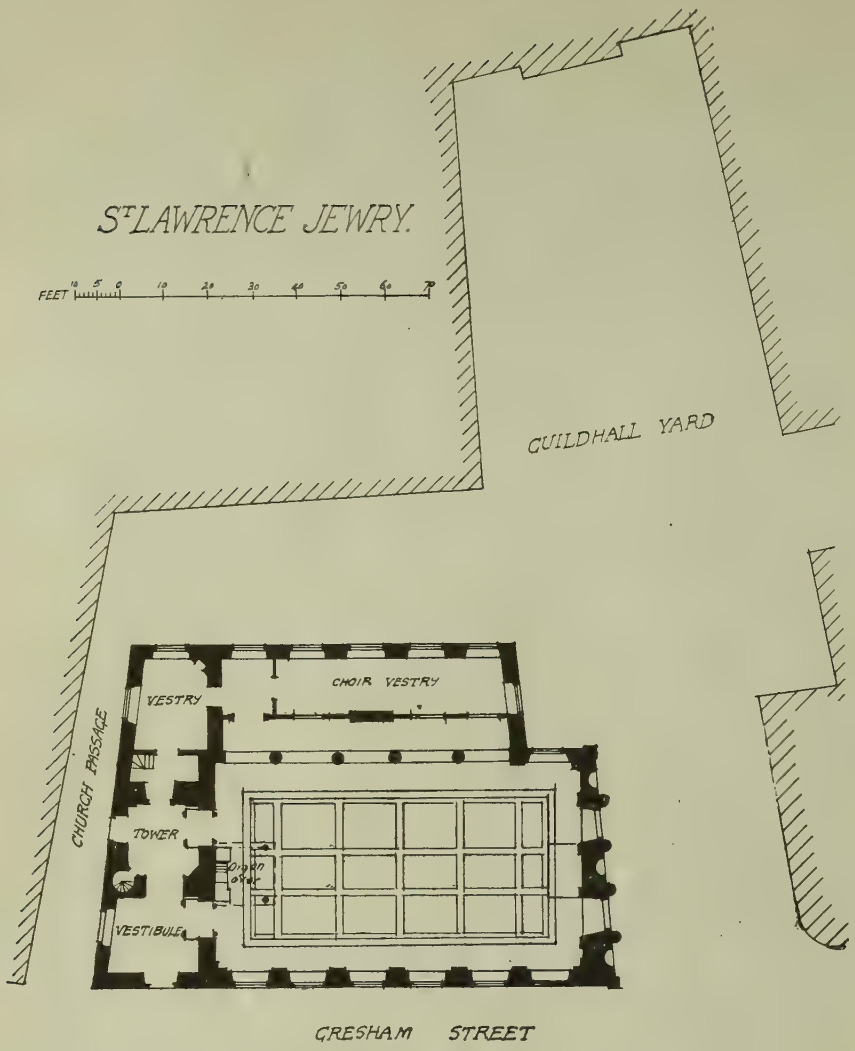
LUTON SECONDARY SCHOOL.

In November, 1914, conditions for a limited competition for a new Secondary School for Girls were issued to selected competitors by the Bedfordshire County Council, and the award has just been made; but we understand the execution of the work is deferred until after the war. The accommodation to be provided was twelve classrooms for twenty-five, an assembly hall, art, chemistry, physics, domestic science, and needlework rooms, three music-rooms, staff-rooms, cloak-rooms, changing-rooms, and other customary adjuncts, as well as caretaker's living accommodation.

In the additional particulars furnished to each competitor it was stated that provision was to be made for at least four tennis courts, one being a hard court, and a hockey ground was also to be provided. The question of future extension had "not been considered, but should not be entirely lost sight of by competitors." The site forms an oblong, 327 ft. long by 150 ft. broad, with irregular ends parallel to Marlborough-road, and reached from it by a neck 150 ft. deep by 120 ft. broad. The larger portion of the site is almost level; the "approach neck" slopes upward from the front in Marlborough-road, about 7 ft. being the extreme difference in levels.

Most of the competitors, including the architects placed first and second, have not utilised the neck except for an approach; but some have placed their buildings partly upon it, while one competitor, No. 7, submits two schemes in each of which the school is kept almost entirely on the neck, thus leaving the parallelogram at the back free—a plan possessing very great advantages, but which makes it necessary to arrange the school on one story, because direct south light is not available. This and the nature of the levels have probably induced most of the competitors to place their buildings in rear, this enabling them to light their classrooms from the south. But since the treatment of the neck as a mere approach is wasteful, no competitor, excepting No. 7, has adopted a single-story type (which we feel to be the best solution of the problem of a school wherever its adoption is possible), because sufficient playground space would not be left. In the design placed first, the authors of which are Messrs. J. R. Brown & Son, of Luton, the whole of the accommodation is arranged on either side of a central corridor, running nearly east and west. On the south side of the corridor are placed five of the classrooms on the ground floor and seven on the first floor. The assembly hall occupies a central position on the north side of corridor opposite the central entrance, and on each side of it are grouped the cloak and changing rooms, the junior and senior entrances being at the ends of the main corridor, the science-rooms over them on first floor, and the art-room over the assembly hall. Near the east end of the building and connected with it by a covered way is a block containing on the ground floor the dining-room, caretaker's rooms, and music-rooms, and on the first floor the domestic science rooms. The elevations are simply and appropriately treated, the planning is straightforward and good, and the scheme carefully worked out, and one which will make a good school.

The authors of the design placed second also submit a well-considered plan in which three classrooms face south and the remaining four east and west; over the assembly hall are the physics and chemistry laboratories, so placed as to utilise a common balance, store,



Wren's Churches. (*See page* 193.)

(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

and dark room. The staircases appear at first sight to be somewhat wasteful, but are well worked out for the various levels and conveniently placed next the assembly hall. The outline of the plan is cramped, the main block with assembly-rooms and classrooms being to the front, and an extension at each side to the rear containing the changing-rooms, lavatories, and dining and art rooms. The buildings are kept close to the north boundary of site, helping the planning of playgrounds and hockey field, which are better arranged than in the design placed first; on the other hand, the planning of the buildings is not on such simple lines. No. 6 has sent in a scheme in which the accommodation is divided into two sections—a building containing the assembly hall and classrooms placed on the main part of the site, the remaining rooms contained in a building occupying the neck, the girls' entrances being placed in a connecting way between the two buildings. The scheme, though ingenious, is too complicated; but the architectural treatment and draughtsmanship are of a high order.

In No. 1 the assembly hall has its axis at right angles to the remainder of the school, which forms a T-shaped block with entrances to either side of the assembly hall in the angles. In No. 2 the buildings are arranged round two quadrangles, with the assembly hall between them. No. 3 forms a scheme planned round a single quadrangle, the elevations being pleasingly treated. No. 4 is a scattered scheme, but is the only one which has not some distinct merit, for the level of the designs submitted is an unusually good one.

Although both the designs placed first and second are good schemes, we prefer that submitted by No. 7 for reasons we have already mentioned—because it makes fullest use of th site and because it is a one-storied plan. Ther must needs be division of opinion on suc matters, and the best that can be expect is that an assessor should choose a good desig conforming to the type which he prefers, whic has evidently been done here.

In No. 7 the classrooms face east and wes being cross-lighted and ventilated. Betwee the classrooms and corridors on either side is central space which in scheme A contains th assembly hall, flanked at either end by areas in scheme B by the art-room at one end and th library at the other, with a central area betwee In scheme B the assembly hall is a positio occupied in scheme A by the art-room. T right and left of the main block, and connect with it by covered ways, are annexes containin the science-rooms on the west and the dinin hall and caretaker's rooms on the east sid These blocks and the northern end of th central building impinge on the larger pa of the site, all else being contained in the "neck. The slope of the site is ingeniously utilised b placing the changing-rooms and domest science rooms under the southern end of th main block. The elevational treatment is of simple Georgian character, and is very pleasin while devoid of the least extravagance. W shall illustrate this design shortly; for while has not met with the assessors' approva we consider it one of the best examples secondary school planning we have seen, an an illustration of the way in which utilitaria buildings may be absolutely architectural character.

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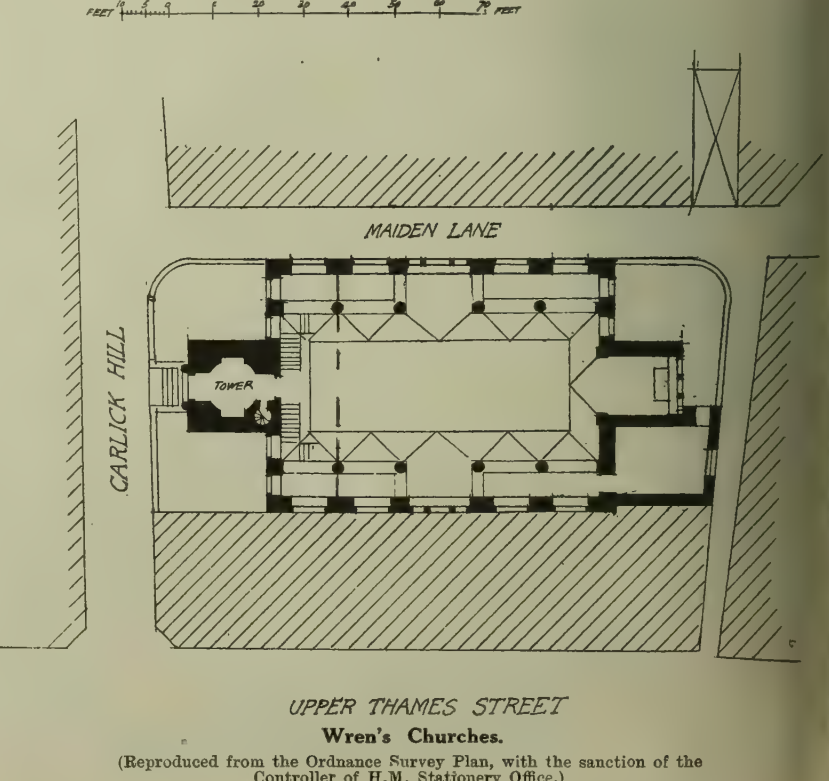
ARCHITECTURAL SOCIETIES.

The Architectural Association of Ireland.

Mr. Harold Leask, President, Architectur Association of Ireland (Dublin), presided at lecture given by Mr. Horace F. O'Rourk Licentiate R.I.B.A., architect, under the auspic of the Association, on "Town Housing." In th course of an interesting address Mr. O'Rourk said that to those interested in the moder revival in Ireland, whether of her languag industries, or arts, it must be apparent th there was a great need for constantly urging her people the dire necessity of proper housi for the working classes in her cities and town For the architectural student of housing a town planning Irish cities and towns afford



Wren's Churches.

(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

it scope for theory but little opportunity practice. There were numerous areas in of the principal cities of Ireland which in r housing conditions were a disgrace to lisation, and to find a match for them we st go to the dens of pauper foreigners in the t End of London. The real cause of the blem in towns was probably the townling movement, but that cause or explanation not universally accepted. The Corporation Dublin had found it necessary to appoint a cial Housing Committee, which for several rs had been struggling with a difficult and plicated task in face of the most skilful and nuous opposition. The problem in Dublin very grave, and a great work yet remained e accomplished in the city to alleviate the and brighten the homes of our less-favoured w-citizens. Benefits conferred on them ted in favour of the whole community.

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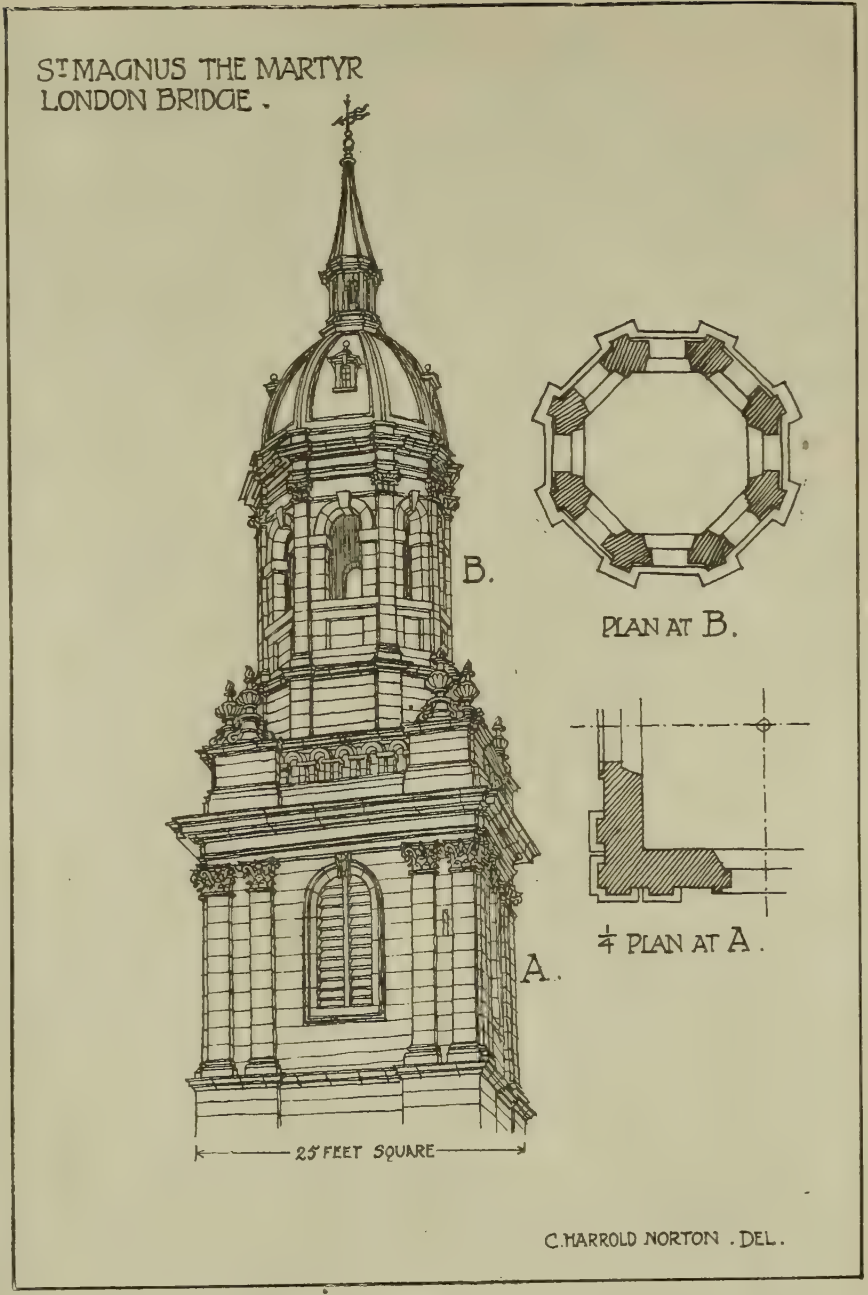
BOOKS.

tt and Redman's Income Tax Law. By the te J. TIDD PRATT, Q.C. Ninth edition, by OSEPH HAWORTH REDMAN. (London: utterworth & Co., Bell-yard, E.C., and haw & Sons, Fetter-lane, E.C. Price 9s. 6d. et.)

is not surprising that this is the ninth ion of the late author's work, the subsidiary of which is "An Analysis of the Income Acts, with decisions, illustrations, and lanatory notes, and a chapter on Excess Profits Duty." That even a careful work on such a subject should constantly need revision and expansion at a time when startling and often confusing changes are made in the law is obvious, and the authors of the volume before us appear to have done all that is possible to explain the present law on the subject. The arrangement of the book leaves little or nothing to be desired, and with a good index and bold index side-headings to the page paragraphs, the information sought for can easily be found.

[Photo.: Geo. Trotman.

Wren's Churches: St. Magnus, London Bridge. (*See page* 193.)



Wren's Churches. (*See page* 193.)

Laxton's Builders' Price-Book for 1916. Originally compiled by WILLIAM LAXTON. Ninety-ninth edition. (London: Printed and published by Kelly's Directories, Ltd., 182, 183, and 184, High Holborn, W.C.)

FOR a work approaching its centenary one can feel a respect due to age, but we are afraid that the editor has not had the courage to attempt anything like a general revision. Our sympathies are with him, but we think he might have done a little more with the items most seriously affected, viz., those relating to woodwork. The prices given are practically those obtaining before the war started, and although it would not be possible, taking into account the rapid rise, to have brought them anything like up to date—*i.e.*, the date of publication—we think that something might have been done. In the case of steel construction, prices have been omitted as being of little value at the present time owing to the shortness of supply. This we can understand, but if prices are given at all they should at least approximate to those obtaining as late as possible up to the time of going to press. However, we hope that by the time this work reaches its hundredth edition things may be more settled and that the Editor will celebrate the event by a thorough overhauling of the prices.

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BOOKS RECEIVED.

BUTTERWORTH'S WORKMEN'S COMPENSATION CASES. Vol. VIII. (London: Butterworth & Co. 12s. 6d. net.)

NOTES ON THE FENLAND. By T. McKenny Hughes, M.A., F.R.S., with a description of the Shippea Man, by Alexander Macalister, M.A., F.R.S., M.D., Sc.D. (London: Cambridge University Press. 6d. net.)

THE CATHEDRALS OF GREAT BRITAIN: THEIR HISTORY AND ARCHITECTURE. By the Rev. P. H. Ditchfield, M.A., F.S.A., F.R.Hist.S. (London: J. M. Dent & Sons, Ltd. 5s. net.)

THE SURVEYORS' INSTITUTION.

A meeting of this Institution was held on Monday at No. 12, Great George-street, Westminster, S.W., when Mr. G. Turville Brown read a paper on "The Management of Estates in Mining Districts, and Mineral Valuations." In the course of his remarks he said:—

This paper deals almost exclusively with districts producing coal and iron, in comparison with which the districts raising other minerals are relatively unimportant. Stone, sand, clay, chalk, and limestone for building and for cement and lime making are so widespread in their occurrence that many of the places which produce them are outside what may be called "mineral districts."

Upon our coal supplies two Commissions, one appointed in 1870 and the other in 1901, have reported. From the monumental volumes they produced it may be gathered that for several hundred years to come we need have no fear as to the sufficiency of our supplies. A more careful examination of their pages shows, too, that, although a great deal of the coal which can be most easily and cheaply mined has been got, there is no reason to fear that the competitive power of our collieries as against foreign coal will be impaired during the years to come.

The state of development to which Britain has been brought by the capital expended in railways and docks, and in all other ways which tend to economy and efficiency in production and transport, and the geographical position of the mines, will probably more than compensate for greater difficulties in obtaining the coal.

The districts which are likely to increase their output are the great South Yorkshire, Nottinghamshire, and Derbyshire field and the steam and anthracite coalfield of South Wales. From these two fields it is certain that, if the output is wanted, considerably greater supplies can be obtained in the future.

On the subject of iron ore the position is far less satisfactory. Up to about the middle of the nineteenth century the great bulk of iron ore which was used in this country was obtained in the coal measures themselves, but the discovery of methods of using leaner ores and the increase in the cost of underground labour have led to a great cessation in the use of Carboniferous iron ores. Their place has been taken partly by ores of Oolitic origin, quarried or mined in the Midlands and in the Cleveland Hills in Yorkshire, by hæmatite ore from Cumberland, and by Spanish and other ores imported from abroad.

Any mining surveyor who could discover further sources of ore which could be worked cheaply, and which would give a metallic content of 30 per cent. or over, within reach of our coalfields, would be doing his country a very great service. It would appear that the Government might well initiate an inquiry into the matter of our iron ore supplies on the lines of the two Coal Commissions. Failing fresh discoveries of iron ore in these islands, it is probable that future smelting works will be placed on the coasts in places where foreign ore can be put direct from ocean-going ships into the furnaces.

Our output of coal, which before the war had reached about 270,000,000 tons, is the second largest output from any country in the world, being only exceeded by the United States of America. On the other hand, our position as iron and steel makers is by no means so satisfactory, as we hold only the third place, being easily outstripped in the race by both the United States of America and Germany. Our production of iron and steel has not kept pace with our output of coal.

In methods of production we are quite in the front rank, though it is worth noting that in the United States a far greater proportion of the mineral (coal and ore) is got by machines than is the case here, and that in the case of difficult sinkings we have still a good deal to learn from the Continent.

Subsidence and support are matters on which great difficulties arise, and in connection with which the tact and knowledge of an experienced agent are of the greatest value. There is no such thing as working coal by modern methods without letting down the surface of the ground, although on the Continent, by what is known as hydraulic packing, it has been found possible to take out an entire stratum without material disturbance of the surface. The difficulties of applying such a method here would probably be so great as to render it impossible to work the mineral at a profit.

Two general rules of subsidence may be noted. The first is that the strata always break at right angles to the dip, so that workings do not affect, except in the case of absolutely flat strata, the surface of the ground immediately above them, but a point where a line drawn at right angles to their dip strikes the surface. This, in the case of deep mines lying at high angles, is a very considerable distance from a point vertically above the working, and this fact is especially important in view of the legal cases affecting subsidence.

The second rule (which is not such an "axiom" as the first) is that the amount by which the surface falls is usually about two-thirds of the thickness of the stratum extracted—*i.e.*, if a 3-ft. seam is taken out the surface falls about 2 ft.

In the case of agricultural land, mere subsidence does not always cause damage unless drainage is interfered with, though there are cases where, by disturbance of the strata beneath, the land ceases to have the power of holding its subsoil water, and consequently becomes so liable to burn in the sun that its value is diminished.

With regard to buildings, if it is desired to mine under land already built on or to build on land to be mined under, the advice of the mining engineer should always be sought. Buildings should be placed, if possible, with their length parallel to the level course or strike of the strata, so that their shorter side is on the dip. They should be put on concrete rafts, reinforced in the case of heavy buildings. A useful reinforcement can be made by inserting in the lower part of the concrete raft a spiral of an old colliery winding rope with old rails put in across it at evenly spaced intervals.

It is a great question whether, when coal is to be worked on the "long wall" principle, pillars should be left even for the support of such important buildings as churches and mansions. But if it is decided to leave pillars it is of the first importance to leave them large enough. A small pillar left for the protection of a building is probably a greater danger than no pillar at all.

Changes in the character of a district, owing to the sinking of mines and the establishment of industrial works, present problems which are more or less akin to those caused by the development of our towns. It may be remarked that the Housing and Town Planning Acts are likely to be of service in the colliery districts, where their wide adoption may be looked for.

Water supply and sewerage questions are of peculiar difficulty in mining districts, owing to the countryside becoming just sufficiently developed to require these facilities without a sufficient increase in rateable value being created to enable them to be supplied without imposing a heavy burden on the community.

It would seem that the time has almost arrived when some further and more comprehensive methods of dealing with water supplies and sewage in each watershed should be adopted when the population has reached a given number per square mile of the watershed. The multiplication of small water undertakings and small sewage disposal works over a district served by one main channel must surely be wrong, and when one knows what pains our great cities have taken to ensure that their water supplies are derived from sources above all possible risk of contamination, the conclusion must be drawn that anything which can be done to give smaller communities some of the advantages which greater centres of population can command must be for good. Boards dealing with both pure and foul water channels and works in each watershed would go nearer to being able to provide such facilities than urban and rural district councils. They would also be far better able to use the drastic powers of the Rivers Pollution Acts than the county councils, some of whom do not attempt to follow the example set them by the Thames Conservators.

With the growth of public knowledge a public taste in matters of hygiene. comfo and climate it is not easy to see how our mini districts are to be repopulated by members the upper and middle classes. One thi surveyors can do, however: they can use eve endeavour to prevent big and medium-siz houses becoming or remaining empty by keepi them up and by letting them even at caretaki rents, and they can set their faces strong against anything being done which unnecessar renders the country unfit to live in. A gre deal can, and will, be done in the future in t way of remedying nuisances and eyesores. notable sign of the times is the replacing of t old ideas of colliery villages with examples su as Brodsworth and Elthorne.

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CORRESPONDENCE.

Germany at Work.

Sir,—In your very appreciative "Note" my show of "Germany at Work" in t Leicester Galleries you make a few observatio which I can scarcely agree with, and hope you will not mind my calling your atte tion to your question, the *raison d'être* building the gasometers of Berlin into castl I thought the reasons for so doing were knov to and approved by all engineers, sanita authorities, and taxpayers; and the mo enthusiastic praise that I heard came fro an eminent architect—not a German—w had seen them. The reasons for so buildi them are that all the fumes, stinks, and b products which vitiate or are wasted on th country's county council protected air, a consumed or made use of, while the buildin are most appropriate and show exactly wh is inside. As to the Tower Bridge not being the design of it—capable of defence, as a me outsider I would say it is the only bridge London designed by a man who knew had to bridge a great commercial river, and n block it up and render it useless for navigatio as all the others do from London Bridge Richmond.

As to German work failing in value wh completed, if when this damnable war is ov you will visit Berlin and compare Wernheim building with Harrods' or Selfridge's, or t great new street in Hamburg which runs fro the Rathaus to the new station with Aldwy and Kingsway, some idea of the "value of this new architecture may be borne in you. And this comparison can be continu in every sort of German architectural, industria and engineering work. Joseph Pennell.

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FIFTY YEARS AGO.

Competitions.

Prudhoe Convalescent Home.—The desi of Mr. Thomas Oliver, architect, of Newcastl upon-Tyne, has obtained the first premiu for the proposed new seaside hospital i tended to be built at Whitley, Northumbe land, in memory of the late Duke Northumberland. There were in all fou sets; the other competitors being Messr J. Johnstone and A. M. Dunn, of Newcastle and Mr. F. R. Haswell, of North Shields.

Bristol Assize Court Competition.

We hear that only one design was receive by the Committee for this proposed buildin sent in by Messrs. Pope & Bindon, all th other architects of the city and neighbou hood remaining firm to the determinatio expressed in their memorial lately publishe in these pages. The result has been tha the one design has been returned unopene to its authors; and, we believe, a new com petition, founded upon the printed sugge tions of the Alliance, will be ere long decide upon. We have reason to know that th Council are earnestly anxious to obtain proposition that would worthily settle th question.

[*** From the *Builder* of March 1 1866.—Ed.]

ENERAL NEWS.

Taxation of Advertisements.

is understood that, in preparation for the ng Budget, the Treasury are considering the ticability of taxing advertisement hoardings.

West Ham Garden City.

r their rehousing scheme in West Ham Port of London Authority have decided proceed upon garden-city lines, and have dy provided 204 cottages in and adjoining e Regent's-lane.

uilders' Clerks' Benevolent Institution.

the annual general meeting on February 29, Frederick Shingleton, M.V.O., was unani-sly elected President for the ensuing year. succeeds Mr. Frederick Higgs, who was tily thanked for his help in procuring a list of donors at a most trying time.

"The Purpose of Discovery."

The Purpose of Discovery: or the Spirit Service of Science," which Professor R. A. ory has written and Messrs. Macmillan & are about to publish, is to display the lity of scientific work, the value of scientific hod, and the practical service of results ined by scientific research.

The Athenæum Club.

he Committee of the Athenæum Club have ed the following under the rule which owers the annual election of a certain ber of persons "of distinguished eminence cience, literature, the arts, or for public ices":—The Rev. Ernest William Barnes, ., Sc.D., F.R.S., Master of the Temple; Ernest Newton, A.R.A., President of the al Institute of British Architects; and essor Thomas Frederick Tout, F.B.A., essor of Mediæval and Ecclesiastical History he Victoria University of Manchester.

Bothwell Castle, Haddington.

othwell Castle, it is stated, has been acquired purchaser, and will shortly be demolished. a massive pile, with a picturesque roundel ne corner abutting upon the street, and looking the River Tyne. It has long been practically ruinous condition internally. s an example of the old strongly-built, ll-chambered type of Scottish burghal llings that were a compromise between the and the homestead, and it comprises resting architectural features. It contains remains of the massive stone fireplace in chamber known as "Bothwell's kitchen."

London Fair.

he London Fair and Market will be held at Royal Agricultural Hall from the 14th he 24th of this month. As soon as the war menced the International Trade Exhibitions, ., began to prepare the London Fair with iew to assisting in the capture of German Austrian markets, and now the Agricul-l Hall, the adjoining Gilbey Hall, and the eries are to be stocked with the manu-ures of various lands, the products of ny countries being totally excluded. Chief ng the sections will be leather and fancy ds of all descriptions, printing, publishing, arts, and such hardware and art metal luctions as have been officially approved.

Stained-Glass Work.

year ago Mr. Henry Holiday exhibited e stained-glass windows carried out from his gns for the west windows of the Church of Thomas, Warlington, U.S.A. He has now pleted the sixteen aisle lights, four of ch were on view at his studio. They ict "Wycliffe," "Queen Anne," "Cranmer," "Laud." The richness and combination colouring is again of a very high standard, should blend well with those already in ition. The representation of the costume "Queen Anne" is particularly successful. the same time Mr. Holiday showed a fresco nting which will form the frieze in the apse St. Benedict, Birmingham. It consists mainly four figures of angels, about 6 ft. high, which spaced between the clerestory windows. e dome of the apse has already been painted Mr. Holiday.

Fall of Chalk.

Two thousand tons of chalk fell close to the main road at Northfleet, near Gravesend, recently.

Housing, Swansea.

At Swansea Corporation Housing Committee it was stated that so great was the demand for houses that 1,000 people were on the books waiting for vacant houses.

Piccadilly Site, Manchester.

At the Manchester City Council recently the question of the Infirmary site was raised by Sir Charles Behrens, and a suggestion was made that as the Tramways Committee were negotiating for the purchase of property off Mosley-street the site should be used partly for a tramway centre. The matter is to be again discussed three months hence, when a report on traffic congestion may be considered.

Laboratory Tests.

At a meeting of the Society of Engineers (Incorporated) on Monday, Mr. Reginald Brown read a paper entitled "Sewage and its Precipitation: Facts and Fallacies from Laboratory and Practical Tests." Laboratory tests, he contended, must be checked by tests on a practical scale before any definite line could be followed or any definite statement made as to the value of a precipitant, and a laboratory test is only sufficient in so far as it gives results under ideal conditions, which are by no means met with in actual practice of sewage disposal.

The British Journal Photographic Almanac, 1916.

This yearly volume, edited by Mr. George E. Brown, F.I.C., is a guide in all photographic matters. It contains a compendium of practical hints, gleaned from the British and foreign papers, formulæ and tables for the various photographic methods, and an article by the Editor dealing with the working of printing processes in a way which the beginner will find instructive. A feature is a review of the resources of British firms in the manufacture of photographic plates, papers, and apparatus. The price of the book, which is published by Messrs. H Greenwood & Co., Ltd., Wellington-street, Strand, W.C., is 1s. net.

Royal Society of Arts.

The prize of £10 and a Silver Medal, offered under the Peter Le Neve Foster Trust by the Royal Society of Arts for an essay on "Zinc: its Production and Industrial Applications," has been awarded to Mr. J. C. Moulden, A.R.S.M., M.Inst.M.M., of Seaton Carew, Co. Durham. Honourable mention has also been awarded to Mr. Ernest Alfred Smith, A.R.S.M., M.Inst.M.M., Deputy Assay Master of the Sheffield Assay Office, for his essay. The adjudicators, on whose recommendation the award was made, reported that the two essays above mentioned were distinctly superior to the others, several of which, nevertheless, were of interest and value. An essay by Mr. Ramji Das Vaishya, of Gwalior, Central India, contained a good deal of information with regard to the production and utilisation of the metal in the East Indies. The prize essay will be read in abstract at one of the meetings of the Society after Easter.

Princess of Wales' Scholarships.

It was announced in Circular 920 that the award of Princess of Wales' Scholarships might be suspended for 1916, or, if continued, would be made on conditions to be announced later. The Board of Education have now decided that, as the National Competition is not this year available as a basis for award, they will, if there is a candidate of sufficient merit, award at least one Princess of Wales' Scholarship on the basis of the Examinations in Art to be held in 1916. The conditions of this Scholarship, both as regards award and tenure, will be identical with those fixed for Local Scholarships by the Interim Regulations for Awards in Art, subject to the following modifications specially affecting the Princess of Wales' Scholarship:—(*a*) The Scholarship will be of the value of £24 for three years; (*b*) it will only be open to women students of Schools of Art who have not previously held a Local Scholarship or a Princess of Wales' Scholarship. The Board may, if they think fit, award a second Scholarship of £24, tenable for one year only.

Mr. W. Eve.

We regret to record the death of Mr. William Eve, senior partner in the firm of Messrs. Wm. Eve & Sons, land agents, surveyors, and architects, of 10, Union-court, Old Broad-street, E.C., which took place on February 13, at Stoke Newington, aged eighty years. Mr. Eve was one of the earlier members of the Surveyors' Institution, being elected a Fellow in 1868, the year of its inception, whilst he was well known as a London rating surveyor. Mr. Eve was born in Silsoe, Beds. He served his articles with the late Mr. Edward Ryde, and had carried on business in Union-court, City, for considerably over fifty years. The funeral service was held at St. Mary's, Stoke Newington, followed by interment at Highgate Cemetery.

Civil Service Estimates.

A portion of the Civil Service Estimates for the coming financial year has been issued. The estimates are for Class 1 (Public Works and Buildings), and the total sum asked for is £2,948,582. The original net estimates for the expiring year were £4,062,740, but the vote for works for the relief of unemployment, totalling £251,000, was withdrawn, and this, with other economies, reduced the total actual grants for Class 1 to £3,818,830. The estimates now published thus show a net decrease of £870,248. Only one vote in the whole class shows an increase, viz., rates on Government property, £25,500. The principal decreases are:—Public buildings, Great Britain, £219,200; revenue buildings, £207,400; surveys of the United Kingdom, £118,900; and public works and buildings, Ireland, £89,000.

Prudential Assurance Company.

From the sixty-seventh annual Report of the Prudential Assurance Company, Ltd., for the year ending December 31, 1915, we take the following:—The number of policies issued in the Ordinary Branch during the year was 68,785, assuring the sum of £6,619,218, and producing a new annual premium income of £457,217. The premiums received during the year were £5,157,516, being an increase of £121,891 over the year 1914. The claims of the year amounted to £4,330,768, of which £145,536 was in respect of war claims. The number of deaths was 11,358. The number of endowment assurances matured was 25,559, the premium income of which was £137,797. The number of policies in force at the end of the year was 935,514. In the Industrial Branch the premiums received during the year were £8,506,063, being an increase of £329,861. The claims of the year amounted to £3,938,596, of which £425,499 was in respect of 25,379 war claims. The bonus additions included in the claims amounted to £276,721. The total number of claims and surrenders, including 15,505 endowment assurances matured, was 429,510. The number of free policies granted during the year to those policyholders of five years' standing and upwards who desired to discontinue their payments was 88,384, the number in force being 1,984,523. The number of free policies which became claims during the year was 51,417. The total number of policies in force in this branch at the end of the year was 20,859,887—their average duration exceeds thirteen years. The war claims paid during the year in both branches number 26,826 and amount to £571,035. The total paid up to the present on this account since the outbreak of war exceeds £750,000 in respect of over 34,500 claims. In the General Branch, under the Sickness Insurance Tables the premiums received during the year were £9,065, and £5,468 was paid in sickness claims. The whole of the fund of £16,955 is reserved for future liabilities. The assets of the company, in all branches, as shown in the balance sheet, are £94,794,798, being an increase of £3,592,454 over those of 1914. The Staff Provident Fund, which was founded in 1898 for the benefit of the outdoor staff, now amounts to £270,637. During the year the company obtained power to substitute a Memorandum and Articles of Association for its Deed of Settlement and Regulations. The new Memorandum enables the company to extend its objects in the direction of undertaking various other classes of insurance (excluding marine and employers' liability insurance) in addition to life assurance.

Leading Contents.

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ILLUSTRATIONS.

Wren's Churches.

WE give reproductions of the plates of St. Lawrence Jewry and St. Magnus, London Bridge, from "The Churches of Sir Christopher Wren," by J. Clayton, published by Messrs. Longmans, Green, Brown, & Longmans, which we give by the courtesy of Messrs. Longmans, Green, & Co. Further notes on the two churches and a plan of St. James, Garlickhythe, will be found on page 193.

The Bristol Branch of the Royal Colonial Institute.

THE restricted and angular area of the available site which was curtailed to improve the entrance to the Victoria Rooms and for a public widening of Whiteladies-road was a governing factor in the planning of the building, and admitted of no waste of space on the ground level where the lines of the boundaries are followed. Above the ground floor the main building is formed with rectangular walls to arrange symmetrical grouping. The difficulties and limitations have thus been carefully and somewhat ingeniously overcome with considerable advantage.

The geographical situation of the building demanded that at least two of the elevations should be regarded as of principal importance, and in order to command views of the Queen's-square with the King Edward Memorial it was important to plan the large rooms with windows overlooking this public space.

The Classic design of the Victoria Rooms suggested that a similar character and relation be introduced in this adjacent new building, but, having regard to the difference in size and the comparatively small frontage available, the architect's design is less severe and monumental, but cannot be regarded as in any way disturbing or undesirable.

The principal façades are throughout of Bath stone architecturally treated with carving and mouldings. All the floors are of fireproof construction.

In many ways and with pleasing effect emblems of the Empire have been introduced as ornaments to the column caps, cornices, and leaded glass; while the names of four important Possessions are carved on hemispheres borne by figures of Atlas surmounting panel pilasters at the principal angles.

The royal coat-of-arms occupies a prominent position in the pedimented gable over the staircase window, below which a label panel bears the inscription: "The gift of Thomas J. Lennard to his fellow-citizens." The entrances are from Whiteladies-road; one for service and back offices.

The lobby, which is lighted by a domed lantern, accommodates a small inquiry office, register desk, notice board, etc. Glazed swing doors divide this outer vestibule from the stair hall, both being paved with black and white marble.

The reception-room on the ground floor is entered from the hall, and has a floor area of nearly 800 sq. ft. with an additional end semicircular bay window fitted with leaded glass in which is introduced a very fine coloured reproduction of the City arms. A massive oak mantelpiece and overmantel surround the marble fireplace. The dado is of panelled oak and floor of hardwood parquet.

A well-appointed gentlemen's lavatory and cloak-room is approached from the hall.

The first floor accommodates a saloon 36 ft. by 22 ft. and 15 ft. high. At one end is added a semicircular bay window, and at the other a raised platform with connected retiring-room. The walls are finished with a high oak panelled dado, and the floor is parqueted. A ladies' cloak-room and lavatory is formed on this level. Upon the second floor a well-fitted library occupies the principal position and is equal in size to the saloon below. In the segmental ceiling two circular lead glazed panels afford subdued top light for reading. Approach by means of casement windows to the asphalted balcony over the bay window provides a delightful opportunity of viewing the Queen's-square from an elevated and commanding position or the enjoyment of a book in the open air.

A service kitchen with pantry is connected to the library for preparation of light refreshments.

The spacious open well grand staircase occupies a space of 18 ft. by 14 ft., and is constructed of teak with heavy carved newels and turned balusters from ground to second-floor levels. The stairs and landings are amply lighted by large windows filled with leaded glass, in which colours are only sparingly introduced; in the upper portion the lion and unicorn, rose, shamrock, and thistle, Colonial products, and the badge of the Royal Colonial Institute are introduced as enrichments. At the rear of the building a fireproof staircase is constructed from basement to the top story for general service, and therefrom are connections at each floor with the principal staircase landings. A back entrance lobby and mezzanine store are also entered from this service stairway. A small electrically-driven lift is installed for the full height of the building.

Fibrous plaster enrichments of special design are applied to the ceiling beams and panelled walls.

The whole building is warmed by means of low-pressure hot-water through radiators fixed in suitable positions, and hot water is installed for the lavatories.

Artificial light is by electricity, and ample provision has been made to ensure well-distributed lamps of the semi-indirect pattern. Special provision is made for light to the saloon to suit requirements of lecture illustrations, etc. Oak furniture and library fittings are made and supplied from the architect's drawings.

The designs were the work of Mr. Norman G. Bridgman, A.R.I.B.A., of the firm of Bridgman & Bridgman, A.R.I.B.A., M.S.A., architects, Torquay, Paignton, and Bristol.

Mr. Frank Wilkins, of Bristol, was the general contractor, and the following specialists were engaged on the building, viz., Messrs. W. J. Spry & Co., Bristol, for heating; Mr. William Smith for carving; Messrs. King & Co., Bristol, for electrical work; Messrs. G. Cox, Ltd., Leicester, for fibrous plaster work; Messrs. Swaine, Bourne, & Son, Birmingham, for stained glass. BRIDGMAN & BRIDGMAN.

Patronal Window, St. Kenelm's Chapel, Clent.

ACCORDING to the legend followed in the treatment of the window, Quendryda, the jealous sister of Kenelm, King of Mercia, endeavoured unsuccessfully to poison him; and, later, induced Askobert, his guardian, kill him.

Kenelm was warned in a dream, and in two quatrefoil traceries is depicted recount it to his nurse. The dream is illustrated the head of the sinister light. Quendryda Askobert are represented in the intermedi traceries above the dexter light conspir outside the hunting palace of Kenelmsto In the head of the dexter light Kenelm shown asleep, the while the unfaithful guard digs his grave. The next subject represe Kenelm chanting the "Te Deum Laudamu and at the words "The white-robed army martyrs" Askobert strikes off his head.

Some time after, as Pope Leo was celebrat mass, a dove appeared, dropping on altar a white scroll giving the whereabo of Kenelm's body. This forms the substa of the next subject. Below is a ship bear the Pope's embassy of monks, who were find and reinter the hidden body. In lower panel of the dexter light the monks seen discovering the spot, and in the trac above the sinister light is represented miracle of the springing water. Another pa depicts the outraged people of Worce barring the way of the men guarding the holders. The lower part of the light dep the monks refreshing themselves near abbey, and the horrible death of Quendry at the west door. The remaining two subj illustrate the two occasions upon which Kenelm is said to have appeared after death.

The subjects, which are adequately int preted by descriptive ribbons, are set u lattice or diamond panes made up of so pure and some slightly tinted whites of s body as to form a mosaic with the inte and jewel-like colour of the subject portion

The window was designed by Mr. Wal Camm, and executed by Miss Florence Messrs. Robert & Walter Camm, at The Stu Smethwick, near Birmingham. Both cartoon and design were in last year's Acade

Bath Improvement Scheme.

WE deal with this fine scheme in an art on page 199. We shall be illustrating perspective views showing the appearance the two ends of the Forum in a subsequ issue, but the six illustrations given are a small part of the series of drawings w which Mr. Atkinson has illustrated explained his scheme.

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MEETINGS.

FRIDAY, MARCH 10.

Glasgow Technical College.—Mr. Peter L on "Economy in Building." 7.45 p.m.

Town Planning Institute.—Mr. F. Longstr Thompson on "Width and Allocation Space in Roads." 8 p.m.

MONDAY, MARCH 13.

University Extension Lecture (at the Victo and Albert Museum).—Mr. Banister Fletcher "St. Paul's Cathedral." 4.30 p.m.

Incorporated Clerks of Works' Association Carpenters' Hall, London-wall).—6.45 p.m.

TUESDAY, MARCH 14.

Incorporated Institute of British Decorators. Mr. Arthur Wilcock, F.I.B.D., on "Colour and Patterned Draperies in Decoratio 8 p.m.

WEDNESDAY, MARCH 15.

Concrete Institute.—Paper by Mr. W. Perkins, M.C.I., entitled "Some Examples Dangerous Structures." 5.30 p.m.

Carpenters' Company.—Mr. H. J. L. Ma on "Seals." 7.45 p.m.

THURSDAY, MARCH 16.

University Extension Lecture (at the Brit Museum).—Mr. Banister Fletcher on "Ea Christian Buildings in Bethlehem." 4.30 p.

CIVIC DESIGN SECTION.

TH IMPROVEMENT SCHEME.

ATH occupies a unique position among English cities, as, though of great antiquity, dating back as it does to an times, its buildings, with the exception of nedieval Abbey Church and a few modern gruities, form a consistent epitome of the tecture of the later Georgian era.

city fell on evil times during the mediæval , and the baths, held in such high esteem e Romans, were neglected and disused. 2, it is recorded, they “were like so many gardens, and modesty was altogether shut t them: dogs and cats were thrown over ails into the waters while people were ng in them. The roads were barely ble, the houses thatched with straw, and a block and manger stood at each door.”

visit of Queen Henrietta Maria directed tion to the importance of the waters and lvantage of rendering the city suitable to commodation of the wealthy, and in 1646, ears after the brief visit of the Queen, the ration passed a series of by-laws for the vement of the city.

y years after, the increase of public ngs, churches, and conduits was notice- but they were still kept within the ancient In the time of Queen Anne Bath became sort of the nobility and the asylum of ny invalids; but its progress was checked nce and the facilities given to foreign travel, ter by the Napoleonic wars.

present position attained by Bath is due to the enterprise and skill of the two s and Baldwin, who, like Nash in Regent- , gave an expression of stateliness to s of private houses, proving that a tive and uniform treatment of private ngs may give a character to be attained other manner. The expression of mediæval ecture depended on the dominance of hurch, that of the eighteenth century on chitectural treatment of private property, in the last century we have seen the results of the uncontrolled individualism age which was not saved by the dominance e great religious inspiration which was ount in the age of the cathedral builders.

s fitting that the Corporation of Bath, ting the results of the work of the town ers of the eighteenth century, should seek as to the manner in which Bath be collectively developed in order to fit ake an undisputed place in the first rank dern European spas. It has everything in our—in a past expressed in architectural which has made it one of the most ful cities in Europe, and the scheme which strate shows how well Mr. Robert Atkin- ho has been employed by the Corporation th to advise them, has carried out his n.

believe he has made a study of almost building of architectural importance in and has looked up the records left by rchitects to whom the city owes its nce. The results of his efforts, if carried xecution, as we hope will be the case at tant date, will give the city what it needs finest municipal centre of any town in untry, without disturbing or destroying f its famous historic elements, and will away slums and dilapidated property centre of the city which at present t from the full effect of the magnificent l disposition of its plan. What we like Mr. Atkinson's scheme is that it is in ete harmony with the work of the planners h: indeed it might have been discovered old engravings in the form of a project. *otif* of the scheme is the formation of a or “Forum” south of the Abbey Church axial line with Philip-street. The sides open space so formed are formed by ump-room and Roman Baths on one nd by a block of existing property on the other, the figure being completed by an hotel and a block of baths at the sides, and the axial line at the Philip-street end being closed by a Concert Hall.

The line of North Parade is continued through the Forum and runs along the side of the Roman Baths into Stall-street. To the south of this line is a suggested new block of baths, balanced by existing buildings, which will be retained; and opposite the Pump-room block is a proposed new hotel, the main entrance to which is from Orange-grove. The whole of these buildings are linked together by a colonnade surrounding the Forum, except on the side of the Abbey Church, while the outer front of the proposed Concert Hall forms the centre of the axial line of Philip-street. The centre part of the Forum is sunk 10 ft. to within 5 ft. of the level of the Roman Baths. This height will enable any remains discovered to be left exposed *in situ*, while any lower level would involve their partial destruction.

The whole is approached by a wide flight of steps protected by balustrades, and the lower part is surrounded by a raised platform of three steps, giving access to the Roman Baths. As the Abbey Church is not symmetrically placed, some feature was necessary to mark the centre line, and a simple horizontal *motif* has been adopted as being most suitable. A bandstand worked in against the screen wall completes the open-air concert theatre, of which steps and balustrades form the background.

The lay-out of the remainder of the Forum is simpler, a circular pond and basin marking the intersection of the various foci, and concentric rings widen out gradually from it. Strong encircling lines of trees, paving, and roadways complete the scheme, which is fully shown in our illustrations.

The colonnades are in keeping with Baldwin's treatment of Bath-street, and give a continuity and completeness to the central space obtainable in no other way, while they would serve a most useful purpose in a resort for invalids.

The suggestions for new buildings are naturally of a tentative nature, but, it would seem, are on very suitable lines, which should require modification in detail only. The bathing establishment would give accommodation for 100 baths, and has been planned with a central glazed winter garden, with large lounge hall and cooling-rooms.

It is proposed to clear out the basement baths in the existing building, as they are not liked by bathers, and encumber the Roman remains which otherwise would be more interesting and easily accessible. It is intended to substitute a new system on the extended site, with accommodation for about eighty bathers.

The planning of the hotel is conjectural, but an endeavour has been made to anticipate modern wants. The chief outlook from it is over the Orange Grove and river. The front of the hotel and new Bath blocks is occupied by shops. The colonnade scheme also includes the treatment of Orange Grove and Gardens, a flight of steps leads down to the Gardens, and the obelisk marks the centre line of Pierrepont-street and forms a focal point in the approach from Station-road, also composing with the extreme edges of Orange Grove and covering the transition from the plain walls to the steps.

It is not proposed to interfere with the circular garden of the Orange Grove; but, as the obelisk has no base, it is proposed to raise it on a pedestal, as it becomes an important focal point.

We feel that the Corporation of Bath are to be congratulated on the excellence of the scheme laid down, and are fortunate in the fact that money spent in developing Bath on the lines indicated is capital which should bring in good interest in the shape of visitors, and it may be urged that the sooner the scheme is put in hand the less likelihood there will be of the city suffering from the competition of foreign spas.

RECONSTRUCTION.

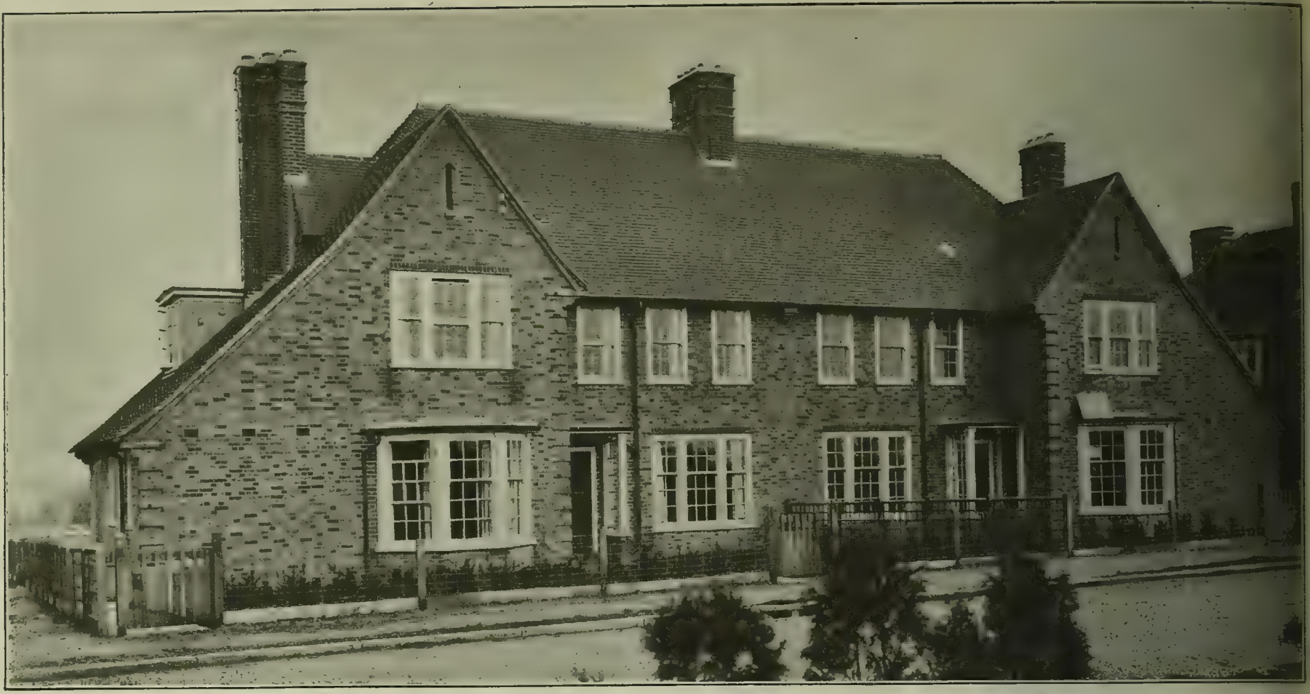
Much must be done in the way of reconstruction of institutions and industries after the war, and this is certain to involve building, for the old order will have changed, giving place to new.

The National Housing and Town Planning Association is doing a most useful work directing attention to the magnitude and importance of the housing problems which confront us, and the National Congress which the Association are promoting should prove most useful in formulating a programme the execution of which will mark a first stage in the reconstruction of the homes of the people in accordance with principles of hygiene, and will put an end to conditions which have tended to sap the vitality of the workers.

Every agency, public and private, must help if a great evil is to be swept away. It is absurd to spend public money lavishly on well-appointed schools and hospitals if conditions which are deemed essential for health in them are entirely disregarded in the homes in which most of the lives of the largest class of the population are spent.

We admire old villages as being picturesque, but an examination of the component dwellings of which they are composed will frequently make us wonder that disease and infirmities do not exact a greater toll of the population than is the case, while in the slums of our great towns similar conditions obtained without the picturesque accessories which partially obscure the squalor of the old English village. Whatever the capital cost may be, it will in the long run be found cheaper to rebuild the habitations of the workers than to provide and support an adequate number of hospitals to cope with disease which is largely due to overcrowding and other insanitary conditions.

The expansion of manufacturing production which is likely to follow the war must necessitate building both in the form of factories and in the provision of housing accommodation in their vicinity, and it is to be hoped that, though few individual firms are likely to do what has been done by Messrs. Cadbury at Bournville and Messrs. Lever at Port Sunlight, few will emulate the carelessness with which the typical nineteenth-century manufacturer desecrated the land by the creation of industrial “hells,” for no other word so adequately describes the South Staffordshire Black Country or parts of South Wales and Lancashire. The feudal tyrant may have made life miserable for his inferiors, but he did not deface the work of Nature beyond recognition, while the industrialism of the nineteenth century destroyed all that “the eye of heaven looks upon.” We may trust that electric power and improved means of transit no less than the high rates of most of the larger towns will more and more tend to the growth of manufacturing industries in the country, and that the agglomeration of larger masses of manufacturing industries in existing centres will be unnecessary. We do not view with complacency the further extension of neighbouring towns towards one another, producing continuous urban districts from which there is no easy escape. We would rather see the growth of new towns of more moderate size laid out on reasonable and convenient plans and situated in the midst of country districts. There is another reason why a further increase in the size of our greatest towns is bad economy, which is that their main arteries are already overtaxed as a result of the growth of population, which renders the rebuilding and replanning of the centre areas very desirable if not absolutely necessary, and these conditions would be intensified if the area occupied is greatly extended. We have built our towns with no provision for future requirements, and it is therefore better policy wherever it is feasible to build entirely fresh centres than to add to existing centres. In other



Nos. 7 & 8, Meadway-Close, Hampstead Garden Suburb: View from Close.

Messrs. B. H. Webb and H. S. East, Architects. (*See page* 201.)

words, we prefer the multiplication of centres like Letchworth to the octopus-like endeavour of Manchester and Liverpool to merge themselves in a continuous urban district.

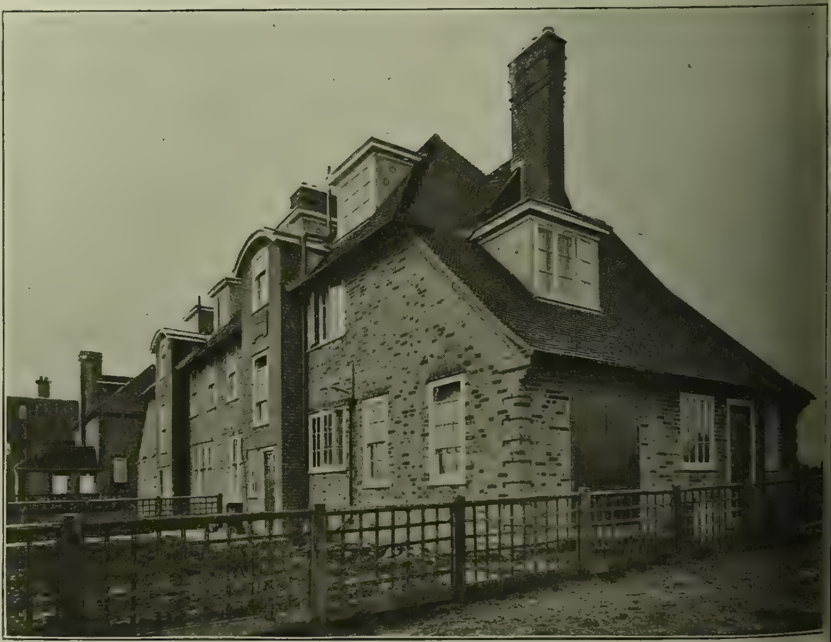
The two divisions of building activity to which we have alluded are most urgently needed both in the interest of the well-being of the people and future commercial expansion, and next to them in importance is the adoption of town-planning schemes in the heart of our existing towns to make good the defects of an unimaginatve past; but such schemes are not likely to be pressed immediately after the war, as most of them involve enormous cost, but they cannot be indefinitely deferred, for doing so will add to their ultimate capital cost, and hardly one of our large towns has been laid out with any regard to the future needs of population, while most of the railway approaches to our towns are badly conceived artistically, and often wasteful, and their rearrangement, especially in the London district, is at once badly needed and enormously costly.

Another problem of the near future will be to consider how by the wise provision of amenities our watering-places by the sea and inland can be made more attractive. The Continental exodus is for the time being ended by *force majeure*, but after the war it will be resumed to as great an extent as before unless our watering-places bring themselves into line with the requirements of the modern world, and money spent wisely on the provision of suitable buildings and the organisation of amusements will pay the localities which adopt progressive schemes, and will also tend to enrich the country by promoting the circulation of money at home instead of abroad. We are glad to learn that Bath is contemplating a scheme which should enable it to offer attractions to its visitors, and put it in a better position to compete successfully with foreign spas, and hope the example will be followed by other inland watering-places, while much leeway has to be made up if our seaside resorts are to be made as attractive as the Norman watering-places and Biarritz. The seaside lodgings, pier, and bandstand which proved sufficient attraction in the time of Leach are not so any longer, while our neighbours have studied the wants of the holiday-maker and made much profit out of doing so. Just as the authorities of the Port of London are carrying out plans which will give London a greater chance of outrivalling foreign ports in its shipping facilities, so ought those in authority in our watering-places to plan how they can attract people who before sought the Continent as a holiday-ground. We have briefly indicated directions in which the reconstruction brought about by the war may affect the building world, for in spite of dear money and heavy taxation there is reason to believe that this country will not be exhausted but invigorated by the effects of the present struggle, and may be on the eve of a more prosperous epoch than she has enjoyed for a long term of years. Though the successful prosecution of the war is our immediate task, the exploitation of the opportunities which peace will bring will be only second in importance, and the realisation of what may be gained is the first step towards attainment. Those in authority have not utilised the services of architects as fully in this period of stress as they might have done in the national interest, but when peace comes the architect's services will be a necessary element in the great schemes of reconstruction which must follow.

COTTAGE BUILDING.

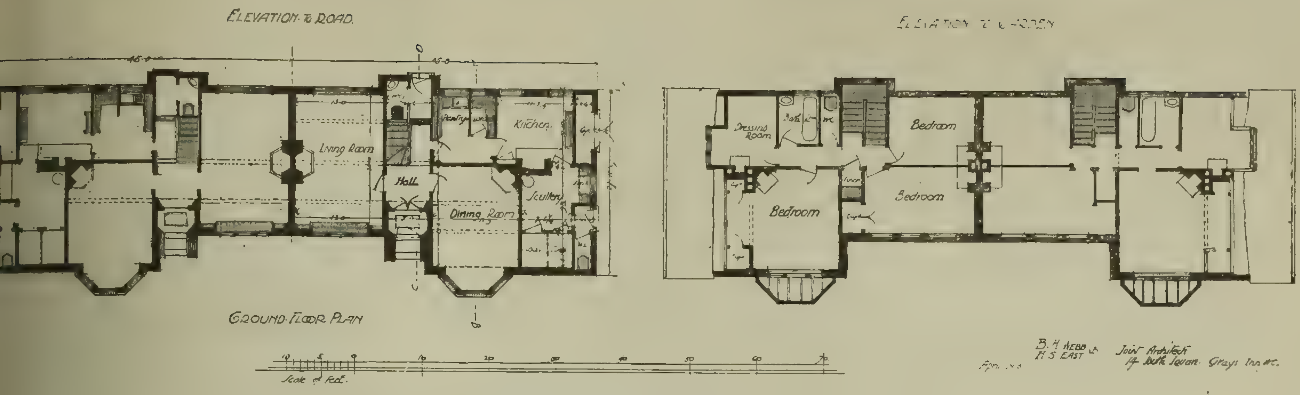
THE great necessity for more housing acc
modation in Sheffield, not only to shelter
thousands of workers who have come into
city since the outbreak of war, but to prov
for the working classes generally, is emphasi
by the details which are to be laid before
Sheffield City Council.

The Wincobank scheme for the housing
additional workers has received the furt
consideration of the Estates Emergency S
Committee, and the City Council are to
recommended to make application to the L
Government Board for their sanction to
borrowing of the sum of £69,200 for the pur
of erecting 261 houses on the High Wincob
Estate, in accordance with the scheme appro
by the Government authorities. The applica
is to be made subject to and in accordance
the conditions on next page.



Nos. 7 & 8, Meadway-Close, Hampstead Garden Suburb: Garden Front.

Messrs. B. H. Webb and H. S. East, Architects. (*See page* 201.)



Nos. 7 & 8, Meadway-Close, Hampstead Garden Suburb.

Messrs. B. H. Webb and H. S. East, Architects.

The department concerned has agreed to ibute 20 per cent. of the total cost of the sed buildings, including the cost of streets ewers, such total cost being estimated at 00—namely, £75,000 for buildings and 00 for streets and sewers.

It is agreed that the cost of the scheme, he Government's contribution of 20 per as aforesaid, will be advanced by the rnment to the Corporation as and when ents in respect thereof shall fall due, and the amounts so advanced will be repaid e Corporation with interest at the rate of cent. per annum on the annuity principle, a period of sixty years in respect of the ngs and twenty-two years in respect of s and sewers.

The houses shall during the period of the e available for munition workers employed national factories in Sheffield or at other engaged in the manufacture of steelwork, uch workers shall during the same period prior claim to occupy the houses as tenants odgers.

The houses shall be completed fit for ation as to 120 in three months after ry 17 last, as to eighty additional in four half months from the same date, and as balance of sixty-one by July 31, 1916. ded that if any delay occurs which is ed by the City Architect to be due to outside the control of the Corporation, ontribution of 20 per cent. as aforesaid e authorities shall not be reduced or eld on account of such delay.

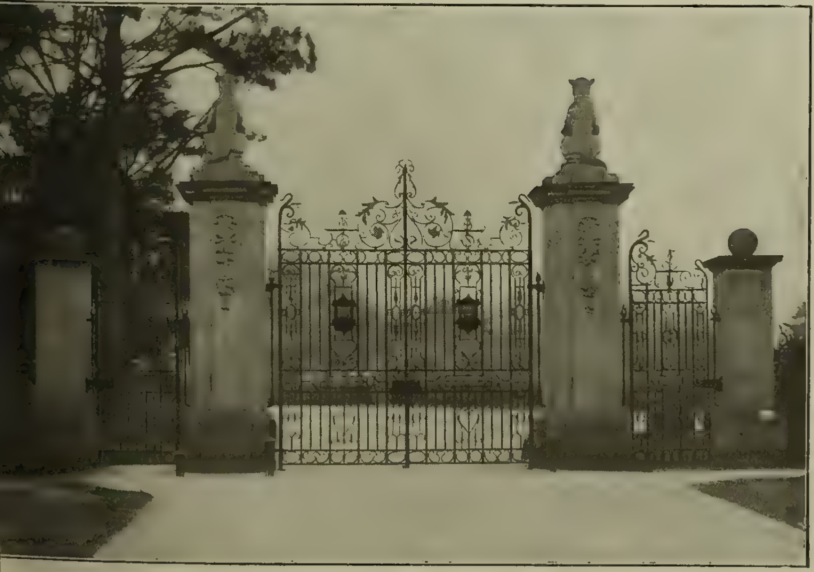
interesting Report issued by a Special ittee appointed to consider the building s of the city will also be placed before the il. The Sheffield Society of Architects Surveyors, and the Master Builders' ation, and the Corporation officials have reports to the Committee on the matter, with the result that the Council are to be asked to agree to by-laws being altered for the period of the war and for two years afterwards, in view of the high price of building materials and the increased cost of labour, and with the object of encouraging the building of cottage property in the city.

The Committee point out that they are advised that economies in the building of cottage property can be made by omitting cellars and substituting pantries and coal-houses on or near the ground-floor level; by the use of reinforced concrete walls in accordance with by-laws; by advantage being taken of by-law relating to the height of rooms, which permits rooms on the first floor to be 7 ft. 6 in. at the eaves; and by the use of asbestos tiles for roof covering instead of slates in accordance with by-laws.

It is further recommended that the Water Committee be requested to reconsider their regulations requiring a ½-in. separate lead water service to be provided in the case of each house having a bath, as the Committee are advised that this service pipe is sufficient for more than one house. The Committee have under their consideration other questions relating to this subject upon which they hope to be in a position to report to the Council at its meeting in April.

WROUGHT-IRON GATES.

We illustrate a fine example of wrought-iron work in the form of some entrance gates which were designed by the late Richard Creed, architect, and which will, we think, be of interest to our readers. Mr. Creed made the ½-in. design, the full-size details were worked out by Mr. J. A. Newington, and Mr. Finch, of Baglan, Briton Ferry, Glamorganshire, carried out the work.



Wrought-Iron Gates made for the Right Hon. Lord Belper.

NOS. 7 AND 8 MEADWAY-CLOSE, HAMPSTEAD GARDEN SUBURB.

THESE houses were built two years ago from the designs of Messrs. B. H Webb and H. S. East on a site facing east and west, and so arranged that the main sitting-room has a view each way.

The walls were faced with parti-coloured red bricks and the roofs covered with sand-faced tiles. Both houses are heated throughout with hot water supplied from an independent boiler which also supplies all the hot water used for domestic purposes.

The accommodation provides two sitting-rooms and five bedrooms and dressing-rooms, inclusive of two large rooms in the roof.

The builders were Messrs. Mattock & Parsons.

CIVIC REVIEW NOTE.

The Garden Cities and Town Planning Association.

THE question of the settlement of discharged sailors and soldiers upon the land, which is recommended by the recent Departmental Committee's Report, will be dealt with at the annual meeting of the Garden Cities and Town Planning Association, which will be held at the Mansion House on Wednesday afternoon, March 22. The Lord Mayor will preside, and among those taking part will be the Marquis of Salisbury, the President of the Association, and the Earl of Selborne, the President of the Board of Agriculture, who will deal with the proposals in the Report. The formation of garden villages, with the idea of a more general distribution of the population upon the soil, has been one of the chief aims of the Association since its foundation, and at the outbreak of war a Special Committee was at work with the idea of establishing a small holdings colony.

LAW REPORT.

KING'S BENCH DIVISION: COMMERCIAL COURT.
(On February 25.)
(Before Mr. Justice SCRUTTON.)

Action against and Counterclaim by Builders: Indented Bar and Concrete Engineering Company, Ltd. v. J. Chessum & Sons.

HIS LORDSHIP had before him a counterclaim by Messrs. J. Chessum & Sons in an action brought against them by the Indented Bar and Concrete Engineering Company, Ltd., of Stoke-upon-Trent.

Judgment had been signed on the plaintiffs' claim for balance of account for quantities of indented steel bars supplied in connection with extensive buildings the defendants were erecting at the Royal Albert Docks, and the only matter for his Lordship's consideration was a heavy counterclaim by the defendants, running (said counsel) into some thousands of pounds, for alleged delay in delivery, in consequence of which, they said, they had suffered damage.

Mr. Roche, K.C., was opening the case for the defendants in some detail, when a consultation took place, and terms were arranged disposing of the matter.

The nature of the settlement was not disclosed.

THE BUILDING TRADE.

WHAT IS A NEW BUILDING?

NOW that the case Rex *v.* Foot's Cray Urban Council, to which we have already referred, is fully reported in the Law Reports (1916, 1 K. B. 246), a few more observations on this important decision seem called for. It will be remembered that a firm of brewers, being desirous of adding to a very old building, a public house, had pulled down a portion of the old building, but had left a larger part of the old building standing; thus the operation was partly an extension, partly a re-erection, on the old site, and the leaving standing of a larger portion of the old building. The brewers gave the Urban District Council notice and plans of the portions of the building which were new, or to be altered, but not of the building as a whole, including the old portion; but the Council summoned them for not having given notice and plans as to the building as a whole. The Council had a by-law that "Every person who shall intend to erect a building shall give the Council notice of such intention, and shall at the same time deliver complete plans and sections of every floor of such intended building."

The Public Health Acts Amendment Act, 1907, was in force in the district, and sect. 23 of that Act provides that "For the purposes of this Act and the Public Health Acts, and any by-laws made thereunder, each of the following operations shall be deemed to be the erection of a new building:—

(*a*) The re-erection, wholly or partially, of any building of which an outer wall is pulled down or burnt down to or within 10 ft. of the surface of the ground adjoining the lowest story of the building.

(*d*) The making of any addition to an existing building by raising any part of the roof, by altering a wall, or making any projection from the building, but so far as the addition only."

A Divisional Court, overruling the magistrates, held that the building as a whole was a new building, and remitted the case to the Justices to convict.

After conviction, fresh plans were submitted, similar as regards the portions of the building being re-erected, but showing the old portion of the building left standing with all the floors. The original plans had only shown the ground floor of this part of the building.

These plans were again disapproved by the Council, and the brewers were served with a notice that the Council intended taking proceedings to recover penalties, on the ground that the brewers had brought forward part of the front of the building beyond the walls on either side of it. This referred to the old existing building.

The brewers then applied for a mandamus to compel the Council to consider and approve the plans. This came before a Divisional Court, but differently constituted to that which had adjudicated on the first case. This court, however, found itself bound by the decision of the court of concurrent jurisdiction in the first case (Leonard *v.* Hoare & Co., 1914, 1 K. B. 798), but one of the judges at least expressed some doubt on the question. In these circumstances the case was carried to the Court of Appeal, and that court, not being bound by the decisions of courts of inferior authority, overruled the decisions. This being a brief history of the litigation, it may be useful to analyse the reasoning of the Court of Appeal on this very important question.

Under the Public Health Act, 1875, sect. 159, it has been held to be a question of fact in each case whether additions and alterations are so extensive as to render the whole structure a new building. See James *v.* Wyvill ([1884] 51 L. T. 237).

Under the London Building Act, 1894, in sect. 5, sub-sect. 6, an exact proportion is named, and, if more than this is taken from an old building, then it is to be deemed a new building.

Neither of these Acts applied to the case under consideration, which was governed alone by the Public Health Acts Amendment Act of 1907, the necessary provisions of which we have set out above, and the Court of Appeal have interpreted sect. 23 so far as it applies to the facts of this case as making a new building, not the whole building, but only such portions as are "wholly or partially re-erected."

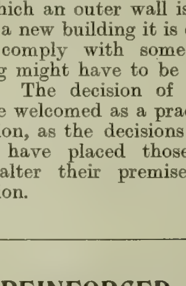
Lord Justice Bankes explained that this statute was passed to meet a plain want and nothing more; it was passed to deal with a re-erection, which, under the statute of 1875, was not sufficient to be a new building, but yet was sufficient of itself to come under the control of the local authority and within their by-laws.

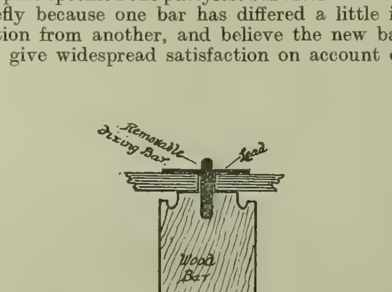
This, surely, is the most practical and satisfactory interpretation of this section, for, as Lord Justice Swinfen Eady pointed out, when the numerous matters contained in modern by-laws are considered, the contrary view would involve pulling down the whole of an old building if one outer wall required reinstating. We may point out that the real issue in this case was whether the notice and the plans deposited were sufficient, a point that the Court of Appeal has now decided in the affirmative. The notice of an offence in bringing forward the building seems to have been merely of a formal character; but it lends point to the observation we have made above, as were every building of which an outer wall is pulled down to be deemed a new building it is quite conceivable that to comply with some by-laws the whole building might have to be set back to a building line. The decision of the Court of Appeal will be welcomed as a practical solution of this question, as the decisions of the lower courts must have placed those desiring to improve or alter their premises in a very difficult position.

A NEW REINFORCED GLAZING BAR.

The Interoven Stove Company, Ltd., of 156, Charing Cross-road, have patented a new reinforced glazing bar. The company are going to carry on this business separately from their stove work, under the title of the Metacon Glazing Bar Company, but from the same address.

The promoters state that architects have in the past specified one puttyless bar after another, chiefly because one bar has differed a little in section from another, and believe the new bar will give widespread satisfaction on account of its anti-corrosive properties. The advan claimed for it are that no painting is neces no putty used in fixing, and no bolts are req to hold the lead flashings in position. is no difficulty in replacing broken glass, as are no nuts or bolts to rust. The bars ca cast in any length or form, while the bar which holds the lead flashing in po is readily removed, and allows of the ins of new lead after years of use. The com will be glad to furnish samples of the particulars of different sections, and pric





The section which we illustrate show great simplicity of the new patent, should meet a widely-felt want. Simp in glazing is everything, as those who had experience with large glass roofs frequ know to their cost. It will be noted although in our illustration the reinforce is applied in the form of T-shaped bars, any convenient section can be as readily The most admirable device in connection w is the ingenuity of the removable fixing and the way it is adjusted in connection the lead flashing, which constitutes the gre novelty, is the best feature of the new pa and one which should secure for it wides popularity and sale. There is no expa and contraction to be provided against, when desired the company can pr purlins, hips, and ridges of the same mater

PROPOSED NEW BUILDI AND OTHER WORKS.*

In these lists care is taken to ensur accuracy of the information given, but it occasionally happen that, owing to bui owners taking the responsibility of comme work before plans are finally approved b local authorities, "proposed" works, a time of publication, have been actually menced. Abbreviations:—T.C. for Council; U.D.C. for Urban District Cou R.D.C. for Rural District Council; E.C Education Committee; L.G.B. for Government Board; B.G. for Boar Guardians; L.C.C. for London County Cou B.C. for Borough Council; and P.C. for P Council.

Australia.—The New South Wales Loan mates, 1915-16, for expenditure on public etc., recommended by the Governor of the for the consideration of the Legislative Ass on December 9 last, contain the following —Harbour works and river improven £821,300; railway line additions, stations buildngs, etc., £407,000; tramway constr and additions to workshops, buildings, house, etc., £265,000; water supply £810,000; public buildings, £135,000; abattoir, meat market, etc., £200,000.

Batley.—The T.C. has had before them for an extensive new mill and warehouse Messrs. John Fenton & Sons intend to er Batley Carr.

Belfast.—The City Surveyor has instructed to carry out certain temporary at Greencastle in order to relieve the fl caused by the overflow from a strea Whitewell-road.

Burnham (Essex).—At a recent meeting U.D.C. plans were submitted for a house built at the corner of Maldon-road for Poulson.

Chelmsford.—The Sanitary Committee T.C. has recommended that the Survey directed to prepare plans, specification estimate for the erection of a dust dest and a report upon suitable sites for a destr

Doncaster.—The T.C. has agreed to con a road on land adjoining the Grand Stand at an estimated cost of £1,600, at the req the Road Board.

Dundee.—Messrs. Fleming & Barry, Camperdown Sawmills, having given u ground they occupy at the harbour, an Caledon Shipbuilding Company, Ltd., applied for this ground for an extension o yard.

Durham.—Plans passed by the R.D.C.

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* See also our list of Competitions, Contract on page 205.

own, motor shed at Auton Stile; Mrs. M.
son, dwelling-house at Cassop Colliery;
. Walter Scott, Ltd., new streets at
ngton Hill.

pstead.—The King has sent a donation of
owards the fund for the reconstruction of
oyal Soldiers' Daughters' Home, Hamp-

tingdon.—A L.G.B. inquiry has been held
he proposal of the Huntingdon T.C. to
refuse destructor near the G.N.R.

n.—It is reported that a Lancashire firm
kers of textile machinery has received
for cotton-spinning machinery for Japan
r or five new mills.

stone.—At a recent meeting of the John-
T.C. it was intimated that the offer by Mr.
Hagart Speirs of vacant ground adjoining
ang-street and Ellerslie-street, to be main-
as an open space for all time, had been
ed by the Council. The Johnstone Co-
ive Society have agreed to erect a shelter
Thomas Shanks Public Park to mark the
of the society.

stown.—At a recent meeting of the U.D.C.
of the artisans' dwellings on the Brook-
and Callaghan's-lane sites were ordered
orwarded to the L.G.B., with applications
sanction of loans amounting to £24,360.

s.—The City Council has approved of the
of the Buckingham House town-planning
e.

lon.—The Licensing Justices have granted
plication with plans for leave to alter the
e Bear," 100, Berwick-street, W. The
olitan Water Board has approved the
ion of the following works:—Substi-
of a Stoney sluice for the existing
oden gates at the Broxbourne sluice on the
River by Broxbourne Churchyard; laying
t 178 yds. of 8-in. pipes under the carriage-
t Crouch Hill between Cecil Park and
ey Borough boundary; lowering of about
ls. of 12-in. main in Church-street,
gton.

sfield.—The T.C. has approved the follow-
ans:—Mr. Joseph Gilbert, stabling and
hed, Rock-court, Bridge-street; Mr. J.
t, ten houses, King Edward-avenue; Mr.
ll, alterations to 85 and 87, Ratcliffe-gate.

lesex.—The Duke of Northumberland has
up, free of cost, 3 acres of land, over a
of 540 yds., for the Great West-road,
the Middlesex C.C. proposed to construct.

rd.—At a recent meeting of the T.C. it
ecommended that the completed plan for
ation hospital, embodying the suggestions
L.G.B., be adopted, and that the same be
the Board for their final approval, and
he architect, Mr. W. Southall, prepare
ations and quantities for inviting tenders
work.

n.—The L.G.B. are to hold an inquiry
eference to the application of the City
l for borrowing powers for £9,000 for
on and alteration at the Gas Works.

ford.—The R.D.C. has approved a scheme
-painting 38 miles of roadway in the
at an estimated cost of £4,231 5s.

ington (Yorks).—The Rossington Main
Company have promised to build a
age house for the curate-in-charge of the
urch at Rossington, which will be com-
in a few months' time.

.—The *Gaceta* of February 19 publishes
l Decree approving the general plan for
nstruction of new roads in Spain, in the
ces of Albacete, Alicante, Almeria, Avila,
z, Baleares, and Barcelona. Tenders will
ned by the Municipality of Almeria on
30 for the construction of a slaughter-
in that city. The estimated cost of the
is 128,817 pesetas (about £5,150).

ng.—The T.C. has agreed that warrant
nted to Mr. Ebenezer Simpson, architect,
e certain alterations on the plans formerly
consisting of altering the wing roof and
window in front of same. Messrs.
e & Co., Forth Cooperage, to erect a
and chip shed within their grounds at
road. The promoters of the Causeway-
euing Scheme have received a letter from
raser, architect, regarding ground at
skenneth, together with a block plan of
posed buildings. The promoters propose
t two blocks of self-contained houses.

ey.—In the New South Wales Legislative
ly Mr. Cann, Secretary for Mines, has
ced a Bill for the construction of a bridge
ing Sydney and North Sydney at a cost of
3,000,000.

ouver.—It is proposed to construct a new
ck at Vancouver which, with the ship-
g plant in conjunction, will cost approxi-
5,000,000 dollars.

.—The Streets and Buildings Committee
recommend the City Council that Good-
e be repaved with wood blocks. The
g plans have been approved by the
and Buildings Committee:—Captain E.
, temporary stable, Mill Mount; Mr. G.
n, temporary building shop, 32, Lawrence-
Messrs. T. Cooke & Sons, Ltd., dining-
c., Bishophill; Education Committee, two
Sycamore-terrace; Anglo-American Oil
ny, naphtha tank and shed, Foss Islands-
Messrs. W. Birch & Sons, Ltd., five
Heworth-road; Mr. G. L. Brown, altera-
143, East-parade.

dmynach.—At a recent meeting of the
illy Council attention was drawn to the
ility of town planning at Ystradmynach.
decided at a forthcoming joint conference
he Gelligaer members whether they would
ate in the suggested scheme for adopting
wn Planning Act.

GENERAL BUILDING NEWS.

ST. JUDE'S CHURCH, MAPPERLEY.

The Bishop of Southwell recently consecrated two new aisles in connection with St. Jude's Church, Mapperley. Hitherto the building has only consisted of chancel and nave. Previous to the alterations, the nave was a building 60 ft. by 24 ft., and originally designed with the idea of extension by means of transepts. Eventually the building is to be extended 16 ft. westwards, with another bay to the arcade. The old roof has been relaid with new tiles, and a good deal of alteration has been done to the original part of the building in connection with roof and heating. The seating accommodation has been increased from under 200 to 400, at a cost of about £3,000. The architects are Messrs. Heazell & Sons; and the work has been carried out by Messrs. Thomas Long & Sons.

CHURCH HALL, EDINBURGH.

A new church hall and vestry for St. John's Church, Princes-street, were recently dedicated by the Bishop of Edinburgh. The building, which is situated on the south side of the church, has been erected over the cloistered vaults. It has been designed by Mr. J. M. Dick-Peddie, and has cost over £2,300. It consists of a clergy-vestry, porch, and a hall, which will accommodate 300 people.

PREMISES, GOLDEN-SQUARE, PICCADILLY.

The superstructure of No. 22, Golden-square, Piccadilly, W., is being executed by Messrs. E. A. Roome & Co., of Crown Works, Urswick-road, Hackney, N.E., under the supervision of Messrs. Naylor & Sale, architects, Market-place, Derby.

TRADE NEWS.

In order to ensure the rough-casting and flat roofs of the kennels of the Royal (Dick) Veterinary College, Summerhall, Edinburgh, being made permanently watertight, we are informed that the powder Pudlo has been employed.

The offices of the Belfast Ropework Company, Ltd., Belfast, are being warmed by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Messrs. Summerscales, Ltd., of 4, Central-buildings, Westminster, S.W., recently gave a special demonstration of cookery by Mr. William Lawton's Patent Gas Cooking Stove. The stove, which is being put on the market by Messrs. Summerscales, Ltd., under the registered trade mark "Barrister," is open and exposed to view, the principle of the closed oven being banished, and it may also be taken to pieces with ease for cleansing purposes when necessary. It is a structure of steel bars, with a horizontal burner so designed as to prevent the annoyance of "firing back," a special radiating screen providing a means of open-fire roasting. The "Barrister" stove is contrived so as to enable a cook to roast, bake, fry, grill, and boil simultaneously with a gas consumption of 15 cubic ft. per hour. It is suitable for small flats and families living in rooms, no floor space being required, as it is operated on the table, a flexible tube connecting it to any gas-fittings, and it may be taken to pieces in one minute after use. The stove is well adapted for use with fireproof ware, it being recommended for the old-fashioned English ware, and having been designed with a view to prevent the breakages which occur with fireproof pots used in connection with the ordinary gas stove. The stove will be retailed at 25s.

Under the direction of Mr. T. B. Whinney, F.R.I.B.A., Old Jewry, E.C., the "Boyle" System of Ventilation (Natural), embracing Boyle's Latest Patent "Air-Pump" Ventilator and Air Inlets, has been adopted for the cheque-sorting-room at the London City and Midland Bank, Finch-lane, E.C.

Messrs. Stevens & Adams, flooring and paving contractors, of Wandsworth, are now completing 6,500 yds. of maple wood block flooring at the new Postal Stores, Studd-street, Islington, and have a similar contract in hand at the new offices for Superintending Engineer, Denman-street, London Bridge, both contracts being carried out for H.M. Office of Works.

NEW COMPANIES.

The undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

J. F. Farwig & Co., Ltd. (142,976). Registered February 10. To carry on business of manufacturers of articles composed of or workers in iron, steel, tin, brass, and other metals or wood, or other substances, smiths, mechanical engineers, carpenters, cabinet makers, builders, etc. Nominal capital, £25,000 in 25,000 £1 shares.

Samuel Osborne (Chelsea), Ltd. (143,080). Registered February 21. To acquire, take over, and carry on business now carried on as packing case makers, saw mill proprietors, timber and general merchants, joinery manufacturers, contractors, dealers in machinery, brick makers, etc. Nominal capital, £5,000 in 5,000 £1 shares.

A. C. Smerdon (1916), Ltd. (143,092), 265a, Finchley-road, N.W. Registered February 23. To acquire, take over, and carry on business of coal merchants and factors, now carried on by J. H. Gill at above address as A. C. Smerdon, dealers in stone, sand, lime, bricks, timber, hardware, and general builders' merchants, mechanical and general engineers, etc. Nominal capital, £1,000 in 1,000 £1 shares.

Whitaker & Clegg, Ltd. (143,101), 76, Manchester-road, Burnley, Lancs. Registered February 23. To acquire, take over, and carry on business of slaters, concreters, asphalters, now carried on at above address, builders, contractors, stone and shale merchants, builders' merchants, quarry masters and owners, joiners, etc. Nominal capital, £5,000 in 5,000 £1 shares.

THE LONDON COUNTY COUNCIL.

The fortnightly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Cyril Jackson, Chairman, presiding.

The first business of the Council was to elect officers for the ensuing year, and Mr. Alfred F. Buxton was elected as Chairman, Mr. W. J. Squires as Vice-Chairman, and Mr. H. H. Gordon as Deputy-Chairman.

Tenders.—Tenders were received for the supply of building materials, oils, etc.; Portland cement for the Tramways Department; river ballast for the Tramways Department; river sand for the Tramways Department; shingle for the Tramways Department.

Loans.—Loans were granted to Metropolitan Borough Councils as follows:—£3,000 and £2,000, respectively, to the Hackney and Poplar Borough Councils for electricity purposes; £1,980 to the Lewisham Borough Council for contribution towards cost of street improvements; and £4,584 to the Stepney Borough Council for repayment of loan for housing purposes.

Appointment of Representative of the Council.—On the recommendation of the Education Committee it was agreed that the Right Hon. Lord Monk Bretton, C.B., D.L., be nominated for appointment as a representative of the Council on the Committee of University College for the twelve months ending February 28, 1917.

Blackwall and Rotherhithe Tunnels—By-laws.—It was reported by the Highways Committee that the amended by-laws relating to Blackwall and Rotherhithe tunnels, made by the Council on November 23, 1915, and December 7, 1915, have been confirmed by the Secretary of State for the Home Department and are now in force.

Council Rate.—The Chairman of the Finance Committee announced that, so far as could at present be judged, and subject to further consideration, the Council rate required for the year to end March 31, 1917, would be:—For education purposes, 1s. 9d. in the £, representing a reduction of 2¼d. in the £ on the rate levied for 1915-16, and for purposes other than education, 1s. 5d. in the £ for parishes outside the City of London, and 1s. 2¾d. for parishes inside the City, the rate of 1s. 5d. representing a reduction of ¾d. in the £.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¼	9¼	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7½	7½	7½
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	9	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	8¾	8¾	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10½	10	10	8½	7½	7½	8
Leicester	10¼	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10½	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7½
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¼	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10½	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

WAGES IN THE BUILDIN TRADE.

Ashton-under-Lyne and Stalybrid At the recent annual meeting of the Nort Centre Board of Conciliation for the Bui Trades an appeal was heard from the join this district. Mr. R. K. Higginbotham behalf of the operative joiners, stated their application for 2d. per hour advan wages had been put forward in consequ of the increased cost of living. He pointe that their district was surrounded by Stock Manchester, and Oldham, where the were higher than those obtaining in As Mr. J. Saxon, on behalf of the emplo stated that they were fully aware of th creased cost of living, and for this reaso sympathetic towards the men, and, alth their notice did not expire until May 1, they had offered them ½d. advance as and February 1, 1916. He also stated that had settled with the operative bricklayers stonemasons for a similar amount, and it a source of disappointment to their Associ that the joiners had not accepted the Mr. C. Marshall supported Mr. Saxon, stated that several employers in the di were executing pre-war contracts upon they had no provision for such advance, a them any increase would be a great hard After considering the evidence the decided:—"That the wages of the oper joiners of Ashton-under-Lyne, Stalyb and District be advanced ½d. per hour (1 10½d.) as and from May 1, 1916, and a fu advance of ¼d. per hour (10½d. to 10¾ and from November 1, 1916."

Basingstoke.—An appeal from the masons of this district was heard at the annual meeting of the South-Eastern Board of Conciliation for the Building T Mr. S. Stranks opened the case for the tives, and said negotiations had been in pr for a set of local rules, and the parties agreed except as to the rate of wages and whether a worked-stone rule for the di should be adopted. They desired that should read:—"That no worked sto allowed to be imported from any lowe district." They also wished that Rule 1 s provide for a rate of wages for maso 9½d. per hour, with an extra ½d. for The present rate was 8½d. per hour, and asked for the advance on the ground increased cost of living, and the fact th plumbers and plasterers were already rec 9d. per hour. Mr. Musselwhite replied f employers, and said the rate for bricklaye carpenters was 8½d., and they were to grant the same to the masons, but ob to the worked-stone rule. He agreed th points of difference were Rules 1 and 8. witnesses having retired, the Board cons the case, and after some discussion the foll resolution was unanimously agreed t became the decision of the Board:— the rate of wages for Basingstoke maso 9d. per hour as from March 1, provided th proposed rule as to worked-stone be drawn."

Coventry.—The following increases in will be paid in this district as from April Carpenters and joiners, bricklayers plumbers, ¾d. per hour (10¼d. to 11d.); pa ¾d. per hour (9¼d. to 10d.); masons' and layers' labourers, 1¼d. per hour (7¼d. to plasterers' labourers, 1¼d per hour (7¾d. t

Dudley.—On and after April 1 an ac in wages of 1¼d. per hour (8¾d. to 10d.) paid to the bricklayers and carpente joiners in this district.

Leicester.—The following increases in will be paid in this district as from Apri Stonemasons, ¼d. per hour (10¼d. to 1 bricklayers, ½d. per hour (10d. to 1 masons' and bricklayers' labourers, ½ hour (7½d. to 8d.); plasterers' labourers. hour (8d. to 8½d.).

Nottingham.—On and after April following advances in wages will be this district:—Stonemasons, bricklayer carpenters and joiners, ½d. per hour (1 11d.); masons' and bricklayers' labour per hour (8d. to 8½d.); plasterers' labour per hour (8½d. to 9d.).

List of Competitions, Contracts, etc.

r some contracts still open, but not included in this List, see previous issues. **Those with an asterisk *) are vertised in this number:** Competitions, —; Contracts, iv., vi., viii.; Public Appointment, xxii; Auction Sales, xxiv. Certain ditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind mselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

e date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

* It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

UILDING AND PAINTING.

late given at the commencement of each aph is the latest date when the tender, or nes of those willing to submit tenders, sent in.

h 10.—**Porth.**—Extensions.—For the ex- to Porth Cottage Hospital, comprising ard, administrative block, operation . Names to Mr. James T. Jenkins, Architect and Surveyor, Porth, la, Glam. Deposit, £2 2s.

h 11.—**Penygraig.**—Additions.—For an n to the bakery at Penygraig, for the aig Co-operative Society. Plans, etc., of . Ivor Evans, architect, Dunraven- rs, Tonypandy.

h 13.—**Portsmouth.**—Demolition.—The outh Education Committee invites tenders ling down Nos. 33, 35, 37, 39, 41, 43, and red-street, and purchasing and removing l building material. Specification, etc., Committee's Surveyor, Mr. Alfred H. ambridge Junction, Portsmouth.

h 14.—**Troup (Banffshire).**—House.— e mason, carpenter, slater, and plaster of new dwelling-house at Westerton of eld, Troup, Gamrie, Banffshire. Plans, f Mr. George Duncan, Ground Officer, Home Farm, by Banff.

h 16.—**Gt. Ouseburn (Yorks).**—Brick- Work, etc.—For bricklayers', joiners', rs', and glaziers' work required about the use for the next six months, for the ans of the Great Ouseburn Union. Forms er of Mr. H. S. Thompson, Clerk, or from eorge Webster, the Workhouse Master, hbridge.

h 17.—**Dover.**—Repairs, etc.—The Com- ers of his Majesty's Works and Public gs invite tenders for the execution of y works and repairs at the Duke of York's Dover, for one year. Form of tender, the Secretary, H.M. Office of Works, etc., s-gate, London, S.W.

h 18.—**Roy Bridge.**—Repairs, etc.—For son, carpenter, and slater works of repairs ditions to shepherd's house and offices at rret, Roy Bridge. Plans, etc., of Mr. Fraser, Estate Office, Gallovie, Kin-

h 20.—**Slateford.**—Reconstruction.—The rs of the Caledonian Railway Company enders for the reconstruction of Slateford buildings, Edinburgh. Drawings, etc., offices of the Company's Engineer, an-street Station, Glasgow, and the t Engineer, Princes-street Station, Edin-

h 21.—**Sheffield.**—Sub-station.—For the of materials and works required in con- with the erection of a transformer sub- in Sidney-street for the Electric Supply ment. Drawings, etc., of Mr. S. E. . General Manager and Engineer, Com- -street, Sheffield.

rch 22.—**Leeds district.**—Repairs, etc.— ommissioners of H.M. Works, etc., invite for ordinary works and repairs.

h 25.—**Cwm (Mon.).**—Chapel.—For the n of a chapel at Cwm, Mon., for the an Methodist Connexion. Plans, etc., of L. Roberts, M.S.A., Abercarn and New-

ril 1.—**Hayes.**—Fifty-two Workmen's ings.—The Hayes U.D.C. invite tenders ction of fifty-two workmen's dwellings.

Date.—**Aberdare.**—Alterations, etc.—For ons and additions to Abernant House, re, for the purpose of converting same cottage hospital. Mr. George Kenshole, , Station-road, Bargoed. Deposit, £3 3s.

No Date.—**Edlington.**—Cinema.—For the erection of a cinematograph theatre (1,000 seats) at the junction of King's-crescent and Edlington-lane, for the Edlington Empire Syndicate. Plans, etc., of Mr. David Milne, A.R.I.B.A., 8, Priory-place, Doncaster.

FURNITURE, MATERIALS, etc.

March 11.—**Bradford.**—Fittings.—Supply to the Corporation of fittings required in the erection of the new branch library, Allerton. Conditons of contract, etc., of the City Architect, Town Hall, Bradford.

March 11.—**Gateshead.**—Oils, Paints, etc.—Supply to the Asylum Committee of oils, paints, glass, etc., and timber. Forms of tender of the Steward of the Asylum.

March 11.—**Stoke-on-Trent.**—Lime.—Supply to the B.C. of lime for the year ending March 31, 1917. Forms of tender of Mr. W. H. Makepeace, Sewage Engineer, Leek-road, Stoke-on-Trent.

March 11.—**Tydesley - with - Shakerley.**—Materials.—Supply to the U.D.C. for the twelve months ending March 31, 1917, of builders' materials. Forms of tender of Mr. Wilson Briggs, Deputy Surveyor, Council Offices, Tyldesley.

March 13.—**Blean.**—Paints, etc.—Supply to the B.G. of paints, etc. Forms of tender of Mr. W. T. Brooks, Clerk, 39, Castle-street, Canterbury.

March 13.—**Down.**—Materials.—Supply to the Committee of Down District Asylum of builders' materials. Tender forms of the Resident Medical Superintendent.

March 13.—**Merthyr Tydfil.**—Materials.—Supply to the Guardians of Merthyr Tydfil Union, for six months, of building materials, etc. Forms of tender of the Master of the Workhouse, Merthyr Tydfil, or the Superintendent of the Cottage Homes, Llwydcoed, Aberdare.

March 13.—**Oldham.**—Paints, etc.—Supply to the Guardians of Oldham Union of paints, etc., lead, and oil. Forms of tender of the Master of the Poor Law Institution.

March 13.—**Weymouth.**—Materials.—Supply to the Guardians of Weymouth Union of building materials, etc. Forms of tender of Mr. H. A. G. Stevens, Clerk, Bank-chambers, Weymouth.

March 14.—**Blackrock.**—Materials, etc.—Supply to the U.D.C. of builders' materials, for the year ending March 31, 1917. Forms of tender of Mr. John Mooney, Town Clerk, Town Clerk's Office, Town Hall, Blackrock, Co. Dublin.

March 14.—**Dundee.**—Paints, etc.—Supply to the T.C. of oils, paints, varnishes, etc. Specification and form of tender at the offices of Mr John Duncan, Superintendent, Cleansing Department, 28, East Dock-street, Dundee.

March 15.—**Haslingden.**—Materials.—Supply to the T.C. of builders' materials, etc., for the year ending March 31, 1917. Forms of tender for lime on application to Mr. R. Austin, Sanitary Inspector, Destructor Works, and for all other materials on application to Mr. J. S. Green, Borough Surveyor, Municipal Offices, Haslingden.

March 15.—**Portsmouth.**—Materials.—Supply to the Guardians of workhouse, Milton, of builders' materials. Forms of tender at the Guardians' Offices, St. Michael's-road, Portsmouth.

March 15.—**Southport.**—Materials.—Supply to the Corporation of builders' materials, etc., for the period ending March 31, 1917. Specifications, etc., of Mr. A. E. Jackson, A.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Southport.

March 15.—**Wembley.**—Materials.—Supply to the U.D.C. of builders' materials for the half-year ending September 30, 1916. Forms of tender, etc., of Mr. Fredk. W. Rodd, Clerk to the Council, Public Offices, High-road, Wembley, Middlesex.

March 16.—**Coulsdon and Purley.**—Materials.—Supply to the U.D.C. of builders' materials. Forms of tender, etc., of Mr. Ernest John Gowen, Clerk of the Council, Council Offices, Purley.

March 16.—**Plymouth.**—Oils and Colours.—Supply to the Guardians of Plympton St. Mary Union of oils and colours. Forms of tender, etc., may be obtained at the Workhouse, or of Mr. John Wm. Bickle, Solicitor, Temple-chambers, Westwell-street, Plymouth.

March 17.—**Londonderry.**—Materials.—Supply to the Committee of Derry Asylum of builders' materials. Tender forms, etc., of Mr. S. Haire, Clerk of the Asylum, Asylum Offices, Strand-road, Londonderry. Deposit, £3.

March 20.—**Eastry.**—Materials.—Supply to the B.G. for three months of painters' materials. Forms of tender, etc., of the Master of the Workhouse, Eastry.

March 20.—**Leek.**—Materials.—Supply to the U.D.C. of builders' materials required during the year ending March 31, 1917. Specification, etc., of Mr. W. E. Beacham, Engineer and Surveyor, Town Hall, Leek.

March 21.—**London.**—Granite Setts.—Supply to the L.C.C. of Guernsey granite setts for twelve calendar months. Form of tender, etc., from the Chief Officer, L.C.C. Tramways, 62, Finsbury-pavement, E.C.

March 21.—**Wolverhampton.**—Paints, etc.—Supply to the Guardians of Wolverhampton Union of paints, etc. Forms of tender of Mr. Frank Harrison, Clerk to the Guardians.

March 22.—**Farnham.**—Materials.—Supply to the Guardians of Farnham Union for six months of building materials. Tender forms from the Master of the Workhouse.

* March 22.—**London (E.C.).**—Window Cleaning.—The Commissioners of H.M. Works, etc., invite tenders for window cleaning in the E.C. district.

March 22.—**Long Ashton.**—Timber, etc.—Supplying the Workhouse with timber and oils and colours from March 31 next. Forms of tender, etc., of Mr. Albert E. Hicks, Clerk, Union Office, Flax Bourton.

March 23.—**Ogmore and Garw.**—Materials.—Supply to the U.D.C. of builders' materials, etc. Forms of tender from Mr. W. T. Ollivant Jones, Engineer and Surveyor, Council Offices, Brynemnyn, Glam.

March 29.—**Dundee.**—Bricks, etc.—Supply to the Corporation of bricks, cement, and wood, from May 1, 1916, to April 30, 1917. Specification, etc., on application to the Head Office of the Electricity Department, Dudhope-crescent-road, Dundee.

ENGINEERING, IRON, AND STEEL.

March 11.—**Irlam.**—Fencing.—Supply and erection of a quantity of iron fencing, for the Irlam U.D.C. Particulars of Mr. R. H. Winterbottom, Surveyor, Council Offices, Irlam.

March 20.—**Faversham.**—Oil Engine, etc.—Supply to the R.D.C., of a 25 b.h.p oil engine and two sets of pumps, etc., for waterworks at Boughton, near Faversham, Kent. Specification, etc., from the Council's Consulting Engineer, Mr. H. Howard Humphreys, 28, Victoria-street, Westminster.

March 23.—**Plymouth.**—Pipes.—Supply to the Corporation Waterworks of steel pipes, etc. Specification, etc., of Mr. Frank Howarth, M.Inst.C.E., Water Engineer, Old Guildhall, Plymouth.

March 25.—**Pontypridd.**—Pipes, etc.—Supply to the Pontypridd and Rhondda Joint Water Board of cast-iron pipes and specials and iron, steel, tools, picks, hammers, etc. Tender forms, etc., at the Waterworks Engineer's Office, 27, Gelliwastad-road, Pontypridd. Deposit, 10s. 6d.

ROAD, SANITARY, AND WATER WORKS.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

March 10.—**Staines.**—Granite, etc.—Supply to the U.D.C. of granite, tarred macadam, and granite chippings from April 1, 1916, to March 31, 1917. Forms of tender of Mr. E. J. Barrett, A.M.Inst.C.E., Engineer and Surveyor, Town Hall, Staines.

March 13.—**Leamington Spa.**—Road Stone.—Supply to the Corporation of about 2,500 tons of road stone. Tender forms at the Road Surveyor's Office, Adelaide-road Depot.

March 14.—**Basford.** — Water Main.—Providing and laying about 700 yds. of 3-in. cast-iron water main, with all necessary special casting and valves, lead service connections, etc., for extending the present water supply in the parish of Cossall, for the R.D.C. of Basford. Plans, etc., from Mr. S. Maylan, Engineer and Surveyor, Public Offices, Basford, Nottingham. Deposit, £2. 2s.

March 14. — **Knaresborough.** — Material. — Supply to the R.D.C. of road material for the year ending March 31, 1917. Form of tender, etc., from Mr. J. H Halstead, Highway Surveyor, 14, Bower-road, Harrogate.

March 15.—**Brighouse.**—Materials.—Supply to the Corporation of road materials, etc., during the twelve months ending March 31, 1917. Form of tender, etc., from Mr. S. S. Haywood, Borough Engineer, Municipal Offices, Brighouse.

March 15.—**Goole.**—Materials.—Supply to the U.D.C. of road materials for the year ending March 31, 1917. Forms of tender, etc., of Mr. J. H. Castle, Engineer and Surveyor, Council Offices, Goole.

March 16.—**Cleckheaton.**—Street Works.—The Cleckheaton Chemical Company, Ltd., invite tenders for the making-up of Iron-street, Cleckheaton. Plans, etc., of Mr. A. Rothera, Engineer and Surveyor, Spenborough U.D.C., Town Hall, Cleckheaton. Deposit, £1.

March 17.—**Wirral.**—Sewer, etc.—For the construction of sewer and manhole in Brimstage-road, Thornton Hough, for the R.D.C. Specification, etc., of the Engineer and Surveyor, Mr. W. Webb Shennan, 9, Hamilton-square, Birkenhead.

March 18.—**Barrow-upon-Soar.**—Material.—Supply to the R.D.C. of road material. Tender form of Mr. Thomas Forward, Clerk to the Council, 36, Humberstone-road, Leicester.

March 18.—**Kiveton Park.**—Slag, etc.—Supply to the R.D.C. of broken slag, granite, and tar macadam for year ending March 31, 1917. Forms of tender, etc., from Mr. F. Hewitt, Surveyor, Council Offices, Kiveton Park Station, near Sheffield.

March 21.—**London.**—Materials.—Supp
the Tottenham U.D.C., for the period e
September 30, 1916, of road materials, lim
cement. Forms of tender, etc., of Mr. Re
C. Graves, Clerk of the Council, Town
Tottenham.

March 22. — **Bournemouth.** — Materi
Supply to the T.C. of road materials. For
tender of the Borough Surveyor, Mr. F
Lacey.

March 22.—**Hallaton.**—Broken Granite,
Supply to the R.D.C. of broken granite,
chippings and broken stone. Mr. J. L. Dou
Clerk.

March 22.—**Strood.**—Material.—Supply
R.D.C. of highway material. Specifica
etc., of the Surveyor, Mr. L. Randers
Meopham, near Gravesend.

No Date.—**Hemsworth.**—Whinstone,
Supply to the R.D.C. of broken and unb
whinstone, limestone, granite, and dross.
of tender of Mr. T. H. Richardson, Sur
Hemsworth, near Wakefield.

Auction Sales.

✱ March 21.—**Lower Clapton.**—Mr. H
Smith will sell by auction, on the premise
machinery and stock of a joinery, packing
showcase manufacturer.

✱ March 22.—Messrs. Churchill & Sim
sell by auction, at the Great Hall, Winc
House, Old Broad-street, E.C., an assor
of deals, battens, boards, timbers, etc.

[Those with an asterisk (*) are advertised in this issue.]

NEW GOVERNMENT CONTRACTS.

War Office.

Apparatus, Drain - Cleaning. — Cakebread, Robey, & Co., Caroba Works, High-road, Wood Green, N.; M. Jacobs, Young, & Co., Ltd., 265, Borough High-street, S.E.; Marshall Bros., 288, Icknield-street, Birmingham; F. Young & Sons, Alma-road, Wandsworth, S.W.

Bolts and Nuts.—Bayliss, Jones, & Bayliss, Ltd., Wolverhampton; Guest, Keen, & Nettlefolds, Ltd., London Works, Smethwick, Birmingham; Horton & Son, Ltd., New Alma Works, Darlaston; W. Martin, Winn, & Co., Station Works, Darlaston; J. Wiley & Sons, Ltd., Eagle Works, Darlaston.

Building, Steel.—A. & J. Main & Co., Ltd., Clydesdale Iron Works, Possil Park, etc., Glasgow.

Buildings, Sectional.—Humphreys, Ltd., Knightsbridge, S.W.

Cement.—Associated Portland Cement Manufacturers, Ltd., Northfleet, etc.; G. & T. Earle, Ltd., Hull.

Chassis, Motor-Ambulance.—Clement Talbot, Ltd., Barlby-road, Ladbroke-grove, W.

Cisterns, Steel, Galvanised.—F. Braby & Sons, Ltd., Ida Works, Deptford, S.E.; S. M. Wilmot & Co., Ltd., St. Philips, Bristol.

Conveyor, Overhead and Steelwork.—Strachan & Henshaw, Ltd., Whitehall Iron Works, Bristol.

Engine, Traction.—Wallis & Stevens, Ltd., Basingstoke.

Granite Setts.—J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.

Locks, Bolts, etc.—Hart, Son, Peard, & Co., Ltd., Grosvenor Works, Grosvenor-street West, Birmingham; R. H. & J. Pearson, Ltd., High-street, Notting Hill-gate, W.

Oven Parts.—G. Abbott, Ltd., Crown Ironworks, Ipswich; J. Ash & Son, Rea-street South, Birmingham; Bayliss, Jones, & Bayliss, Ltd., Wolverhampton; J. Elwell, Ltd., Phœnix Ironworks, Birmingham; S. Estler Bros., South Molton-road, Victoria Docks, E.; Falkirk Iron Company, Ltd., Falkirk; S. J. & E. Fellows, Ltd., Wolverhampton; H. Green, Knellar Iron Works, Brockley, S.E.; Henney & Tring, 142B, Fulham-road, South Kensington, S.W.; A. Hunt, Ltd., Milton-street, Leicester; Jackson Electric Stove Company, Ltd., 38, Blanford-street, W.; J. R. Reidman & Co., Bradley-street, Canning Town, E.; J. Sankey & Sons, Ltd., Castle Works, Hadley, Salop; S. Smith & Sons, Ltd., Beehive Foundry, Smethwick, Staffs; J. Yates & Co., Ltd., Birmingham.

Pipes, Cast Iron, etc.—Birtley Iron Company, Birtley Iron Works, Birtley, Co. Durham; Staveley Coal and Iron Company, Ltd., Staveley Works, near Chesterfield.

Piping and Fittings, Metal.—Glover, Edwards, & Co., Blackhorse-road, Deptford, S.E.; J. Spencer, Ltd., Globe Tube Works, Wednesbury; Scottish Tube Company, Ltd., Clydesdale Tube Works, Rutherglen, Glasgow, etc.; Stewarts & Lloyds, Ltd., Dalmarnock Bridge, Glasgow, etc.

Pumping Sets.—Peco Engines, Ltd., Duddeston Mill-road, Birmingham; Warner & Co., Ltd., Walton-on-Naze, Essex.

Pumps, etc.—Beck & Co., Ltd., 130, Gt. Suffolk-street, Southwark, S.E.; Duke & Ockenden, Ltd., Ferry Wharf Works, Littlehampton; Holman Bros., Ltd., Camborne, Cornwall; W. Matthews & Co., Ltd., Boston-lane, Manchester; Merryweather & Sons, Ltd., Greenwich-road, S.E.; Robey & Co., Ltd., Globe Works, Lincoln; Tangyes, Ltd., Cornwall Works, Birmingham; J. Tylor & Sons, Ltd., Belle Isle, York-road, N.

Rollers, Steam.—Aveling & Porter, Ltd., Rochester.

Rope, Wire.—W. N Brunton & Son, Musselburgh; Craven & Speeding Bros., Wear Rope Works, Fulwell-road, Monkwearmouth, Sunderland; E. Ellis & Co., Ltd., Alpha-road, Millwall, E.; Glaholm & Robson, Ltd., Sunderland; Rylands Bros., Ltd., Warrington; Whitecross Company, Ltd., Warrington; Wilkins Wire Rope Company, Ltd., Eastwood, Nottingham.

Screws, Brass.—British Screw Company, Ltd., 153, Kirkstall-road, Leeds; Guest, Keen, & Nettlefolds, Ltd., Smethwick, Birmingham.

Sheets, Corrugated, Steel.—J. Summers & Sons, Ltd., 14, Chapel-street, Liverpool.

Steel, Constructional.—J. Lysaght, Ltd., St. Vincent's Ironworks, Bristol.

Tackles, Differential.—J. Barnsley & Sons, Netherton, Dudley; Stringer & Son (Cradley Heath), Ltd., Crown Pulley Block Works, Cradley Heath; Tangyes, Ltd., Smethwick, Birmingham.

Tools (Term Contract).—Hobson, Houghton, & Co., Ltd., Don Steel Works, Sheffield.

Tube-Wells and Accessories.—Duke & Ockenden, Ltd., Ferry Wharf Works, Littlehampton; Guthrie, Allsebrook, & Co., 29/31, Crown-street, Reading; C. Isler & Co., Ltd., Bear-lane, Southwark, S.E.; A. C. Potter & Co., Lant-street, Borough, S.E.

Tubing and Fittings, Metal.—S. Dixon & Son, Ltd., Leeds; Scottish Tube Company, Ltd., Clydesdale Tube Works, Rutherglen, Glasgow, etc.; Stewarts & Lloyds, Ltd., Dalmarnock Bridge, Glasgow, etc.

Works Services.—Drainage at Wye: Mid-Kent Water Company, Snodland, Kent; drainage at Thetford: Linzell & Edmondson, All Saints'-road, Newmarket; drainage scheme at Kinross and Dunfermline: Watson & Sons, 53, Caledonian-road, Perth; drainage work at Shirehampton: H. W. & E. J. Neale, Guined-street, Bristol; drainage work at Thetford: Coulson & Son, 37, St. Andrew's-street, Cambridge; electric light at Crowlarns Camp, Barrow-in-Furness: E. M. Evans & Sons, Ltd., 1 and 5, Leven-street, Edinburgh; electric-light installation at Haynes Park: Girdlestone & Co., 13, Davis-street, W.; electric lighting at Bridge of Allan: Mackenzie & Moncur, Ltd., Balcarres-street, Edinburgh: electric lighting at Kinross: Mackenzie & Moncur, Ltd., Balcarres-street, Edinburgh; electric lighting at Dunfermline: Grindlay, Ross, & Co. Ltd., 47, Waterloo-street, Glasgow; hot-water installations at War Hospital, Bath: G. N.
Haden & Sons, Lincoln House, King
W.C.; heating installations at Wool
G. N. Haden & Sons, Lincoln House,
way, W.C.; installation of electric light,
etc., at War Hospital, Bath: N. G. Midd
Broadway-chambers, S.W.; surface dra
at Dreghorn: T. Topping & Co., 52,
road, Edinburgh.

Maintenance of Camp and W.D. Bui
at—Cork: T. Kelleher, 4, Millend-street,
Dover: A. G. Lockwood & Co., The
Westgate-on-Sea; Hartlepool: G. H. Le
Northgate-road, Hartlepool; Leeds: T.
& Sons, Cyprus Works, Thackley, Brad
Longmoor: Jenkins & Waghorn, East
Hants; Shoeburyness: W. P. Goose &
124, Milton-road, Gravesend; South
J. F. Bainbridge, 15, Portland-terrace, R

India Office: Store Department.

Chains, etc.—J. Rabone & Sons, H
Abbey Works, Birmingham.

Drills.—E. G. Wrigley & Co., Soho, Bir
ham.

Fishbolts.—Guest, Keen, & Nettl
London Works, near Birmingham.

Plant, Stone-cutting.—Bramley Engin
Company, Bramley, Leeds.

H.M. Office of Works.

Building Works.—Bradford District, or
works and repairs: Thomas Obank &
Cyprus Works, Thackley, near Bradfor
dustrial Museum, alterations: Fred P
Ltd., 133, Marylebone-road, N.W.

Engineering Work.—Teddington Re
Building, motor generator, etc.: Vickers,
Broadway, Westminster, S.W.

Miscellaneous.—Birmingham Parcels
fittings: E. Crowder, Farm-street, Bi
ham; wood-block flooring: Stevens & A
Point Pleasant, Wandsworth, S.W.; e
cable and wire, supply and delivery of,
1916; the General Electric Company, Lt
Queen Victoria-street, E.C.; W. T. H
Telegraph Works Company, Ltd., Blo
street, London Wall, E.C.

Post Office.

Troughing, Earthenware.—Doulton &
Ltd., Rowley Regis, Dudley, Worcesters

Tube, Lead.—G. J. Chatterton, Ltd.,
donian-road, N.

Wire, Bronze.—T. Bolton & Sons,
Oakamoor, Staffs; F. Smith & Co.,
porated in the London Electric Wire Co
and Smiths, Ltd., Salford, Manchester;
shire Iron Company, Ltd., Hadley, Sal

Wire, Galvanised Iron.—Rylands Bros.
Warrington.

Laying Ducts, Cast-Iron Pipes, and
Pipes between Thornaby and Stockton.
Ewart, Ltd., 21, Old Queen-street, Westm
S.W.

Commissioners of Public Works, Ire

Carrigallen National School, Co. Lei
Erection: Patrick O'Rourke, Lahard C
Ballinamore, Co. Leitrim.

CES CURRENT OF MATERIALS.

ing to the exceptional circumstances which il at the present time, prices of materials d be confirmed by inquiry.]

ce our last issue sheet and red lead have been sed.—ED.

ur aim in this list is to give, as far as possible, the ge prices of materials, not necessarily the highest west. Quality and quantity obviously affect prices act which should be remembered by those who use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
Stocks	2 0 0
d Stocks for Facings	2 12 0

er 1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
ons	1 10 0	BestBluePressed Staffordshire	4 14 0
Fareham d	3 12 0	Do. Bullnose	4 18 6
RedPressed abon Facing	5 5 0	Best Stourbridge Fire Bricks	4 14 0
ED BRICKS—			
t White,		D'ble Str'tch'rs	17 17 6
ory, and		Double Headers	14 17 6
t Glazed retchers	12 7 6	One Side and two Ends	18 17 6
ers	11 17 6	Two Sides and one End	19 17 6
ns, Bullnose d 4½ in. ts	15 17 6	Splays and Squints	17 7 6

Second Quality £1 per 1000 less than best.

	s. d.	
nes Ballast	7 9	per yard, delivered.
nes and Pit Sand	8 0	„ „ „
Washed Sand	9 0	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
Portland Cement	2 5 0	..	2 8 0

. £2 1s. alongside in 80-ton lots.

crete 2s. 6d. per ton extra on above.

Ground Blue Lias Lime.... 1 3 6 at rly. depôt.

.—The cement or lime is exclusive of the ordinary charge for sacks.

Stone Lime .... 17s. 0d. per yard delivered.

rbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
STONE—delivered in railway trucks at estbourne Park, Paddington, G.W.R., or uth Lambeth, G.W.R., per ft. cube	1 7
do. delivered in Railway trucks at Nine ms, L. & S.W.R., per ft. cube	1 8¾
do. delivered on road waggons, Nine Elms pôt	1 9¼
LAND STONE—	
own Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W., per ft. cube	2 5½
. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2 6½

hite Basebed, 2d. per ft. cube extra.

OOM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
ster in blocks	2 0	Closeburn Red Freestone	2 2
in blocks	1 7¼	Red and White Mansfield Random block	2 9
hill in blocks	2 4	Yellow Magnesian Limestone do. do.	3
ey Dale in cks	2 5		

STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
pled random blocks	3 4
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landings to sizes (under ft. super.)	2 5
rubbed two sides ditto, ditto	2 8
n. sawn two sides slabs (random sizes)	1 0½
to 2½ in. sawn one side slabs (random sizes)	0 8¼
. to 2 in. ditto, ditto	0 6¾

D YORK—

Per Ft. Cube, Delivered at Railway Depôt.	
pled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landing to sizes (under 40 ft. per.)	2 3
rubbed two sides ditto	2 7
sawn two sides slabs (random sizes)	1 0
self-faced random flags	0 5

TILES.

Per 1000 f.o.r. London.

	£ s. d.
machine-made tiles or hand-made sanded tiles from either Broseley or affordshire district	2 12 6
mental ditto	2 15 0
and valley tiles (per dozen)	0 5 6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£ s. d.
Blue Bangor slates, 20 by 10	11 16 0
quality „ „	11 10 0
„ „ 16 by 8	5 15 0
Blue Portmadoc, 20 by 10	11 13 6
quality „ „	11 3 6
„ „ 16 by 8	5 15 0

WOOD.

BUILDING REDWOOD.

Imported sizes.	Per standard. £ s. d.		£ s. d.
s: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	29 0 0	..	30 10 0
in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	28 0 0	..	29 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard. £ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in.	24 0 0	..	25 10 0
2 in., 2½ in., and 3 in. by 7 in.			
2 in., 2½ in., and 3 in. by 6 in.			
2 in., 2½ in., and 3 in. by 5 in.			
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.			
3 in. by 4 in., and 3 in. by 4½ in.			
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0		more than battens.
¾ in.	1 0 0		
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best.
Best Middling Dantzic and Memel Fir Timber Logs	Per load of 50 ft. cube.		
(average specification)	8 10 0	..	—
Seconds do. do.	8 0 0	..	—
9 in. to 10 in. do.	7 0 0	..	—
6 in. to 8 in. do.	6 10 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	10 0 0	..	11 0 0
Do. 6 in. to 10 in.	8 0 0	..	9 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Rio do.	23 0 0	..	25 0 0
Under 2 in. thick	0 10 0		extra.

JOINERS' WOOD.

	£ s. d.		£ s. d.
White Sea First Quality Red:			
4 in. by 11 in.	35 0 0	..	36 0 0
3 in. by 11 in., and 2 in. by 11 in.	34 0 0	..	35 0 0
4 in. by 9 in.	33 0 0	..	34 0 0
3 in. by 9 in., and 2½ in. by 9 in.	32 0 0	..	33 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	24 0 0	..	25 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Seconds quality	2 0 0		less than best.
Third quality	£2 to £3		less than seconds.
Archangel White Deals—			
Best 3 in. by 11 in.	28 0 0	..	29 0 0
3 in. by 9 in. and 10 in.	26 0 0	..	27 0 0
Seconds, do.	1 10 0		less than best.
U.S. Battens	19 10 0	..	20 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 7 in. planed and shot	1 8 6	..	1 13 0
1¼ in. by 7 in. planed and matched	1 9 0	..	1 13 0
1 in. by 7 in. planed and shot	1 3 0	..	1 6 0
1 in. by 7 in. planed and matched	1 3 0	..	1 7 6
¾ in. by 7 in. planed, matched and beaded, or V jointed	0 18 0	..	0 19 6
1 in. by 7 in. do.	1 3 0	..	1 5 6
⅝ in. by 7 in. do.	0 14 0	..	0 15 0

	Per standard.		
Columbian or Oregon Pine, best quality	35 0 0	..	40 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		„
Seconds, regular sizes	43 10 0		„
Oddments	37 10 0		„
Kauri Pine—Planks per ft. cube	0 7 6	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6 upwards.
Dry Walnut, American, per super, as inch	0 1 0	..	0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 5 0	..	21 5 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

METALS (*Continued*).

	Per ton, in London. £ s. d.		£ s. d.
IRON—			
Common Bars	15 10 0	..	—
Staffordshire Crown Bars, good merchant quality	15 10 0	..	16 10 0
Staffordshire "Marked Bars"	17 0 0	..	17 10 0
Mild Steel Bars	16 10 0	..	17 0 0
Steel Bars, Ferro-Concrete quality, £17 10s. basis price.			
Hoop Iron, basis price	18 10 0	..	19 0 0
„ „ Galvanised	30 0 0	..	35 0 0

(* And upwards, according to size and gauge.)

	£ s. d.		£ s. d.
Sheet Iron Black—			
Ordinary sizes to 20 g.	18 10 0	..	19 0 0
„ „ 24 g.	19 10 0	..	20 0 0
„ „ 26 g.	20 10 0	..	21 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	29 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	29 10 0	..	—
Ordinary sizes to 26 g.	32 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	30 0 0	..	—
„ „ 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	28 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	28 10 0	..	—
Ordinary sizes, 26 g.	29 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 15 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 0 0	..	—
Best Soft Steel Sheets, 26 g.	21 15 0	..	—
Cut Nails, 3 in. to 6 in.	18 10 0	..	19 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
LEAD—Sheet, English, 4 lb. and up		39 0 0	..	—
Pipe in coils		39 10 0	..	—
Soil pipe		42 10 0	..	—
Compo pipe		42 10 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—				
Strong Sheet	per lb.	0 1 5	..	—
Thin „	„	0 1 6	..	—
Copper nails	„	0 1 5	..	—
Copper wire	„	0 1 5	..	—
BRASS—				
Strong Sheet	„	0 1 3	..	—
Thin	„	0 1 4	..	—
TIN—English Ingots	„	0 1 10	..	—
SOLDER—Plumbers'	„	0 0 10	..	—
Tinmen's	„	0 1 0	..	—
Blowpipe	„	0 1 2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	„ fourths	7½d.
26 oz. thirds	7d.	Fluted Sheet, 15 oz.	5¾d.
„ fourths	6¼d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Occanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 9
„ „ „ in barrels	„	0 3 10
„ „ „ in drums	„	0 4 1
Boiled „ „ in barrels	„	0 4 0
„ „ „ in drums	„	0 4 4
Turpentine in barrels	„	0 4 1
„ in drums	„	0 4 4
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		49 15 0
Red Lead, Dry	per ton	56 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	61 15 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

PATENTS.

APPLICATIONS PUBLISHED.*

22,388 of 1914.—Moses James Adams: Urinals.

1,651 of 1915.—Arthur John Roach-Cuming: Door and door frame, particularly applicable to storage chambers and safes.

1,738 of 1915.—Harry Ernest Grove and Frederick Gordon Barker: Tile and method of setting same to be employed in the construction of that portion known as the regenerator chamber in gas-making or carbonising plants.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

◆

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BALLYSHANNON.—For the drainage of cottages, Erne-street, Ballyshannon, for the Rural District Council:—

J. Dundas*	£140

FALMOUTH.—For the construction of about 425 ft. of 6in. stoneware pipe sewers and a septic tank at Penmere-terrace, Falmouth, for the East Kerrier Rural District Council. Mr. Parmenas Pearce, sanitary engineer, Penryn. Quantities by Engineer:—

N. C. Scott	£149 18 6
H. Thomas & Son, Falmouth*	110 19 0

LONDON.—For the supply to the London County Council of (*a*) 500 driving-wheel tyres, and (*b*) 250 pony-wheel tyres:—

Cammell, Laird, & Co., Ltd.—(*a*) £38 10s. a ton; (*b*) £55 10s. a ton.

H. Bessemer & Co., Ltd., Bolton*—(*a*) £38 10s. a ton, less 2½ per cent. discount; (*b*) £55 10s. a ton, less 2½ per cent. discount.

LONDON.—For foundation and building work for the King's-road electricity station extensions, for the St. Pancras Borough Council:—

W. Downs, Ltd., Hampton-street, Walworth-road, S.E.‡	£3,583

‡ Recommended for acceptance.

LONDON.—Accepted by the Metropolitan Water Board for the supply of stores, etc.:—

Battersea (Renewal of Stock).—Reflux Valves.	
J. Stone & Co., Ltd.	£28 7 6
Battersea (Renewal of Stock).—Painted Steam Tube.	
J. Russell & Sons, Ltd.	£38 2 6
Kent.—Siemen's Meters.	
T. Beggs & Son	£126 18 0
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King & Scarborough	£130 0 0
Kent (West Wickham).—Mild Steel Ladder.	
W. Hayward & Sons, Ltd.	£25 5 0
Battersea (Stock).—Staffordshire Iron Bars.	
Miles, Druce, & Co.	£58 0 0
Battersea (Stock).—Best Soft Blue Spanish Lead.	
Grey & Martin, Ltd.	£314 12 6
Battersea (Central Buildings).—Deal.	
Melliar, Smith, & Co.	54 0 0
Battersea (Central Buildings).—Rough Boarding Deal.	
King & Scarborough	£45 10 0
Accommodation Works.—¾-in. Galvanised Tube.	
Stewarts & Lloyds, Ltd.	£25 13 9
Battersea (Stock).—Chisel Steel and Cast Steel.	
W. Jessop & Sons, Ltd.	£33 0 0
Battersea (Central Buildings).—Electric Light Fittings.	
Simplex Conduits, Ltd.	£27 16 5
Hampton.—Boiler Tubes.	
Babcock & Wilcox, Ltd.	£42 3 9
Kent (Shooter's Hill).—Chestnut Pale Fencing.	
Economic Fencing Co., Ltd.	£31 16 0
Hampton.—Steel Rails, Fishplates, etc.	
W. Jones	£47 6 5
Southern (Brixton).—Leicester Granite Cubes.	
Midland Quarry Co., Ltd.	£42 10 0
Battersea (Stock).—Screw-down Stopcocks.	
Woodhouse & Co., Ltd.	£425 0 0

Northern (King George's Reservoir Works).—Steel Sheet Piling.

British Steel Piling Co., 3s. per super. foot, and 30s. each for bending corners.

WALLINGTON.—For tar-spraying 180,000 sq. yds. of road, for the Beddington and Wallington Urban District Council. Mr. S. F. R. Carter, A.M.Inst.C.E., Surveyor:—

E. & E. Iles	£1,640 12 6
Johnston Bros.	1,181 5 0
Durable Roads, Ltd.	1,096 17 6
H. V. Smith & Co., Ltd.	1,078 2 6
Taroads, Ltd., 9, Victoria-street, Westminster, S.W.*	984 7 6

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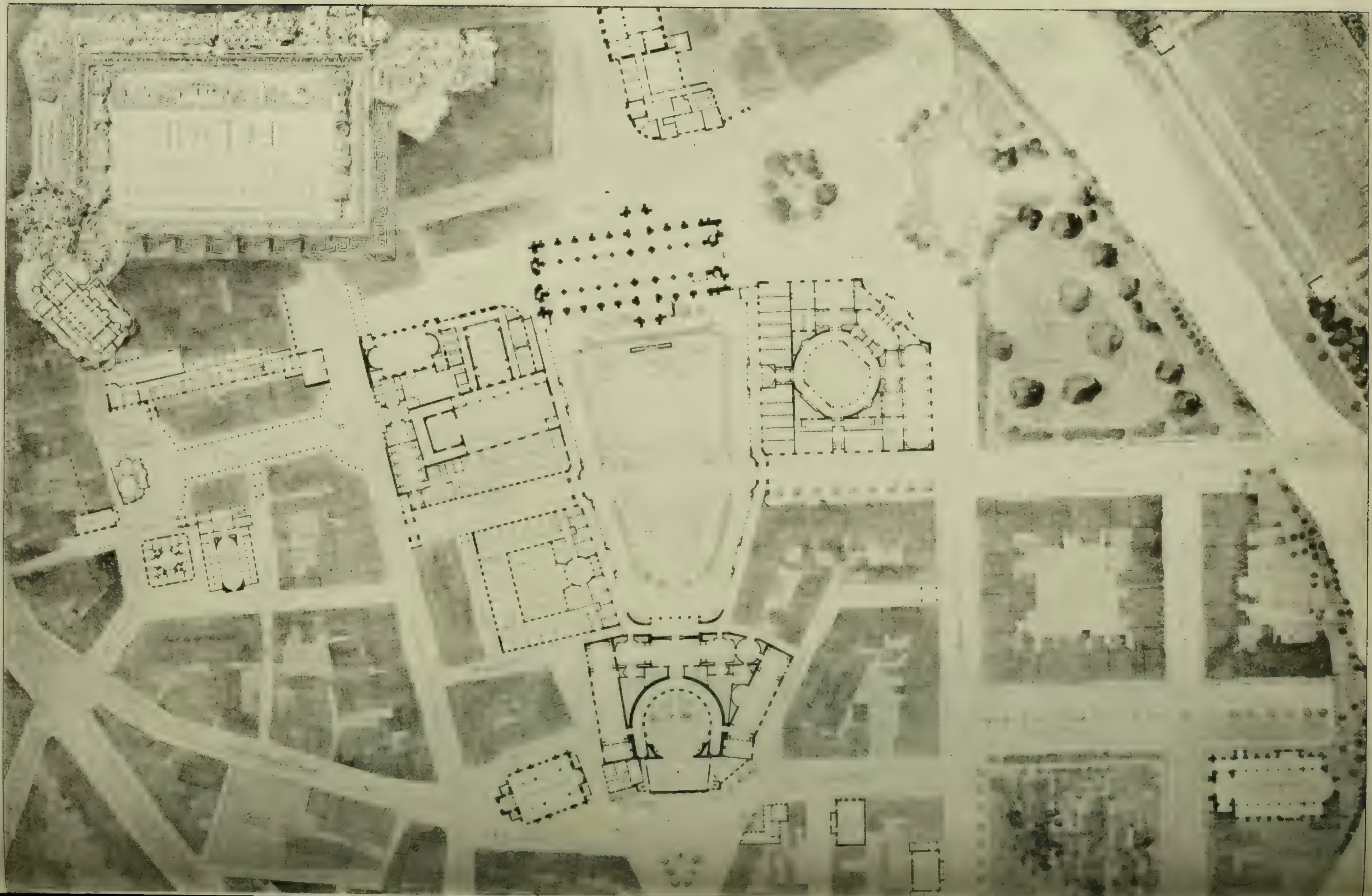

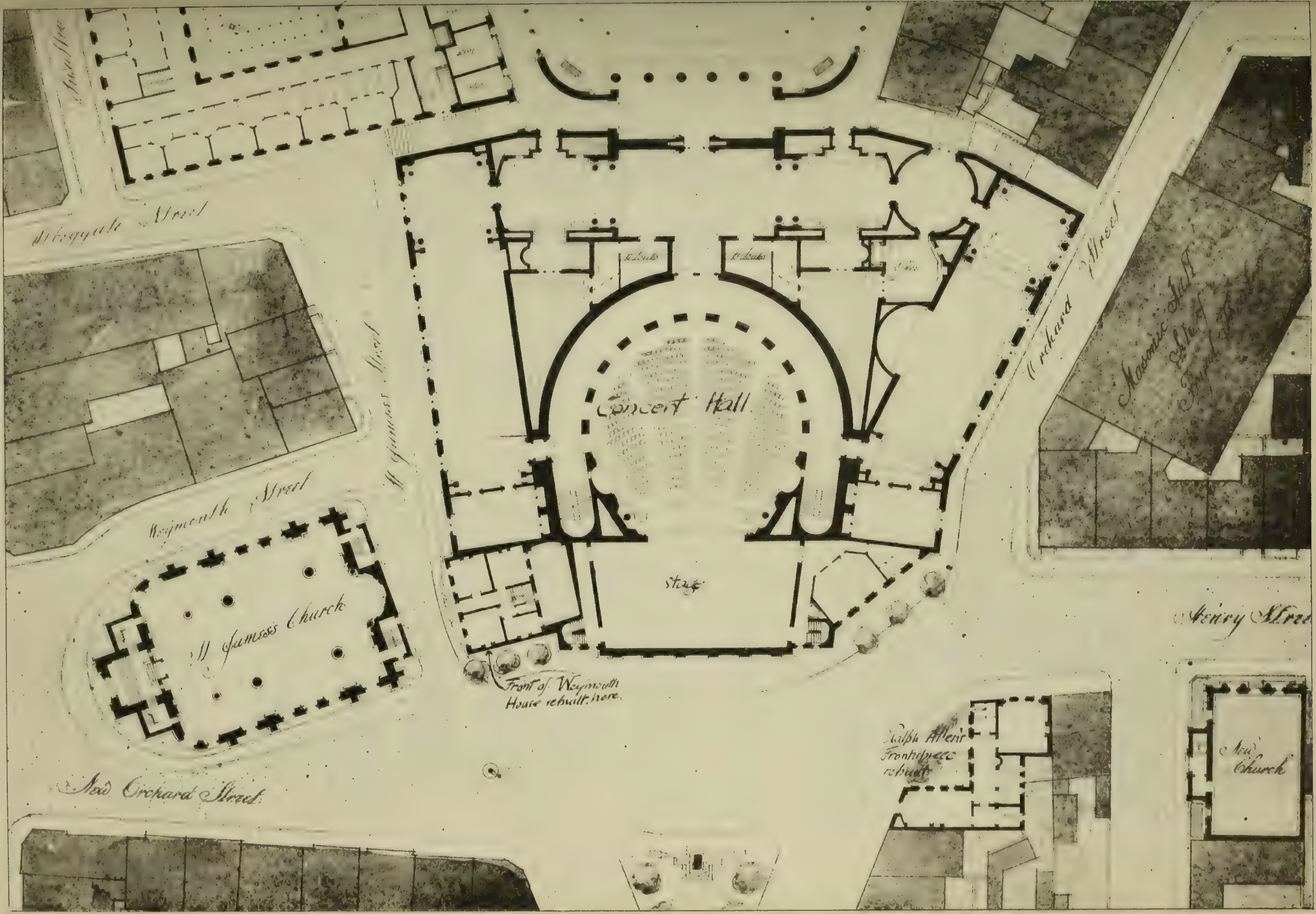

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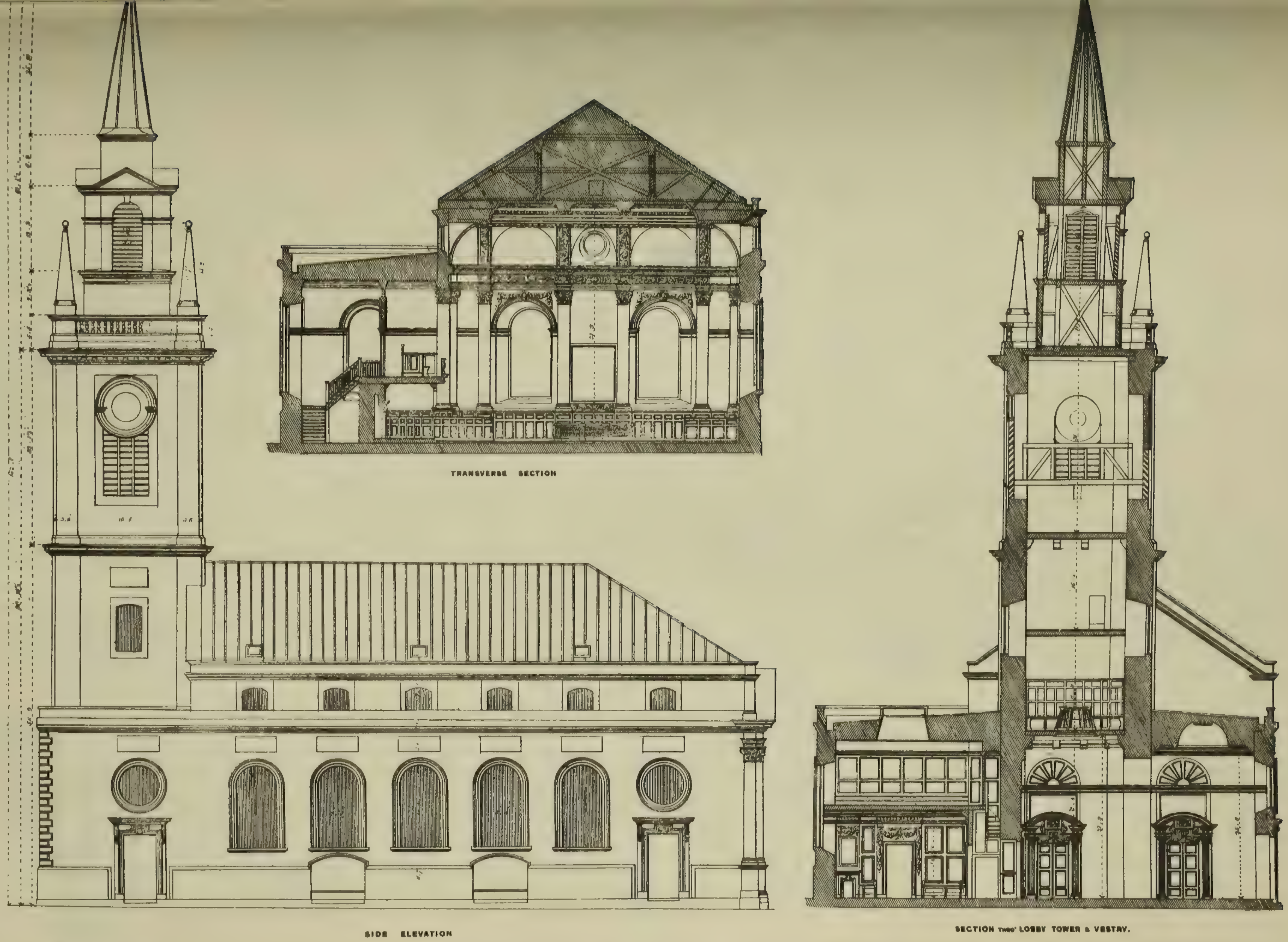

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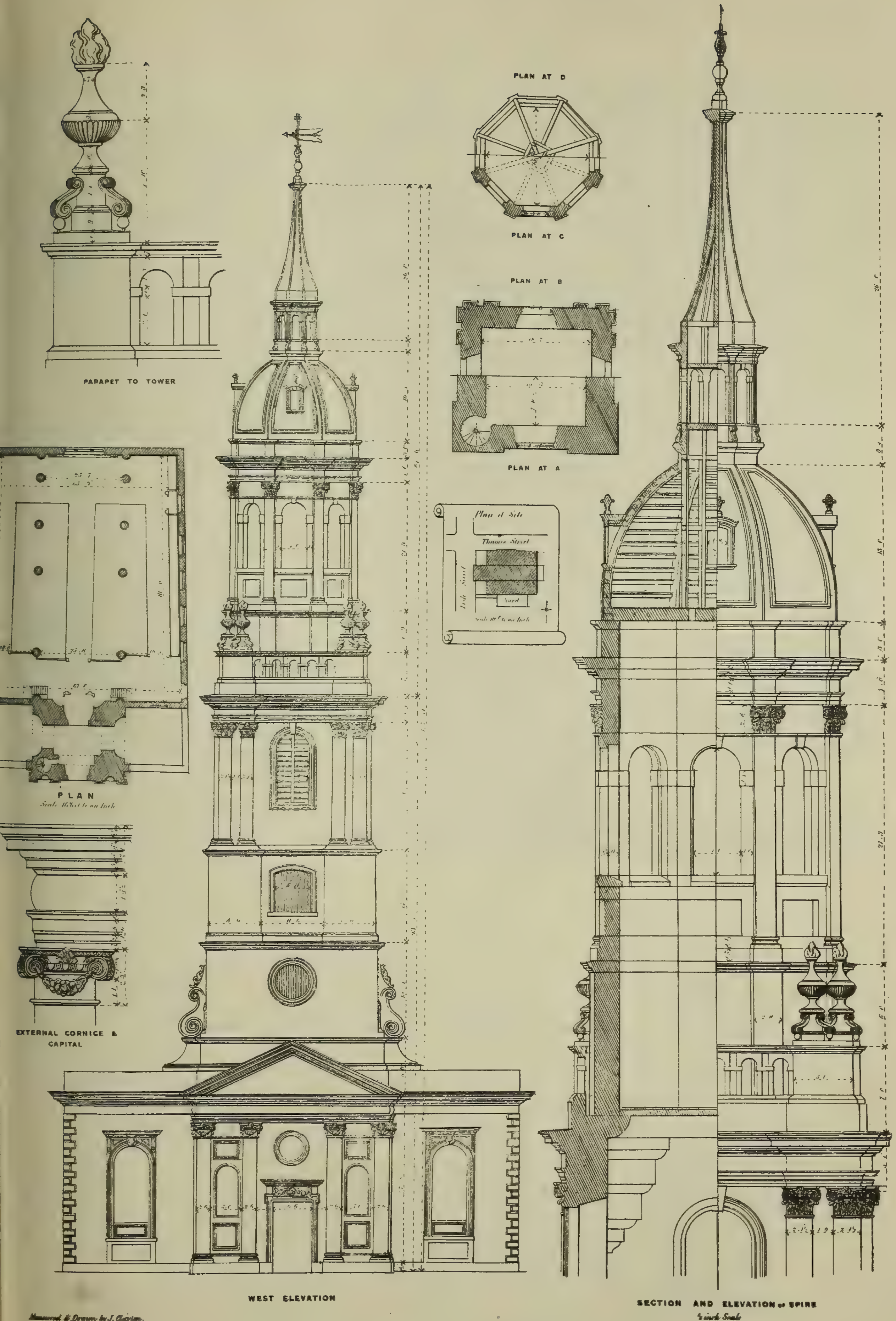

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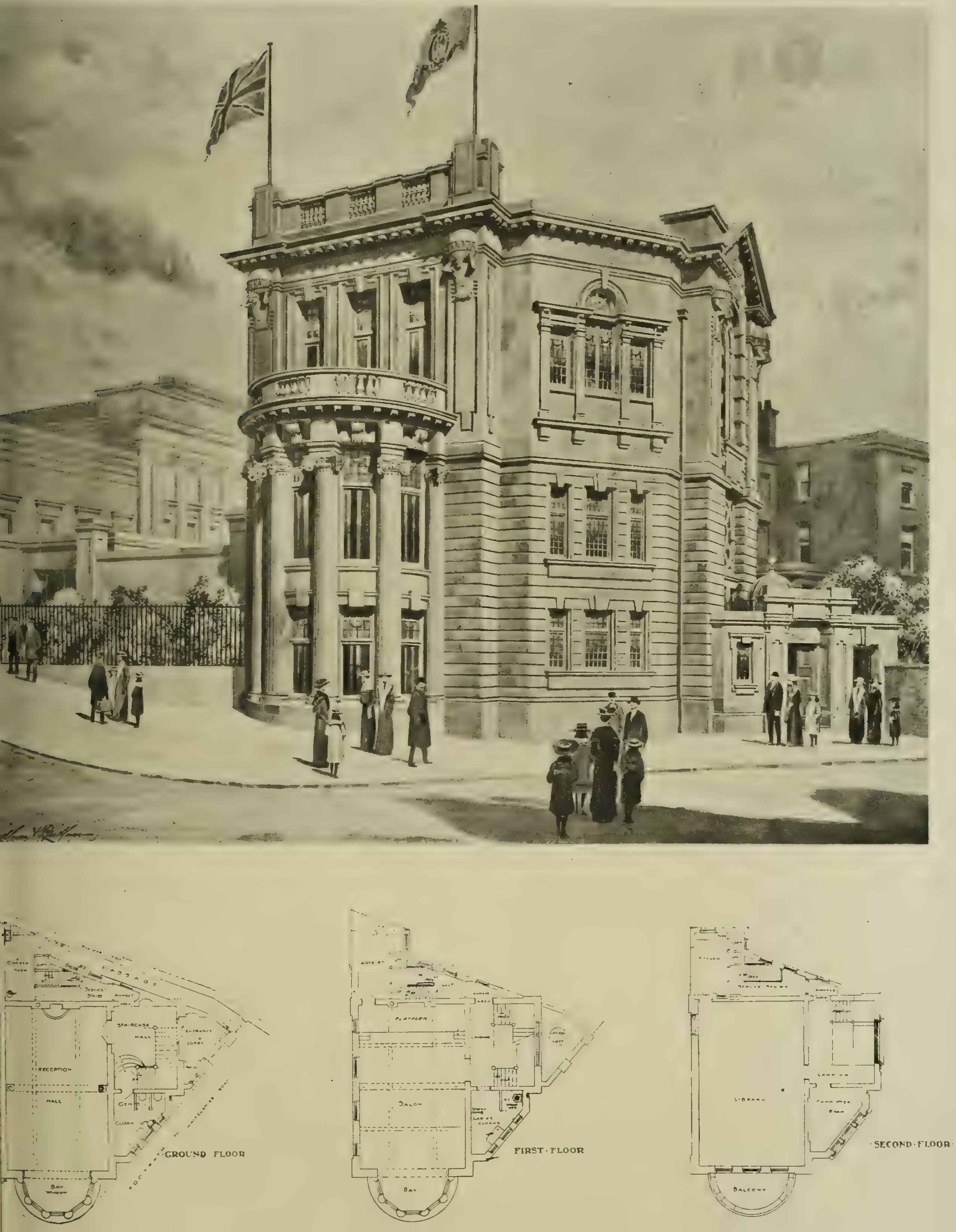

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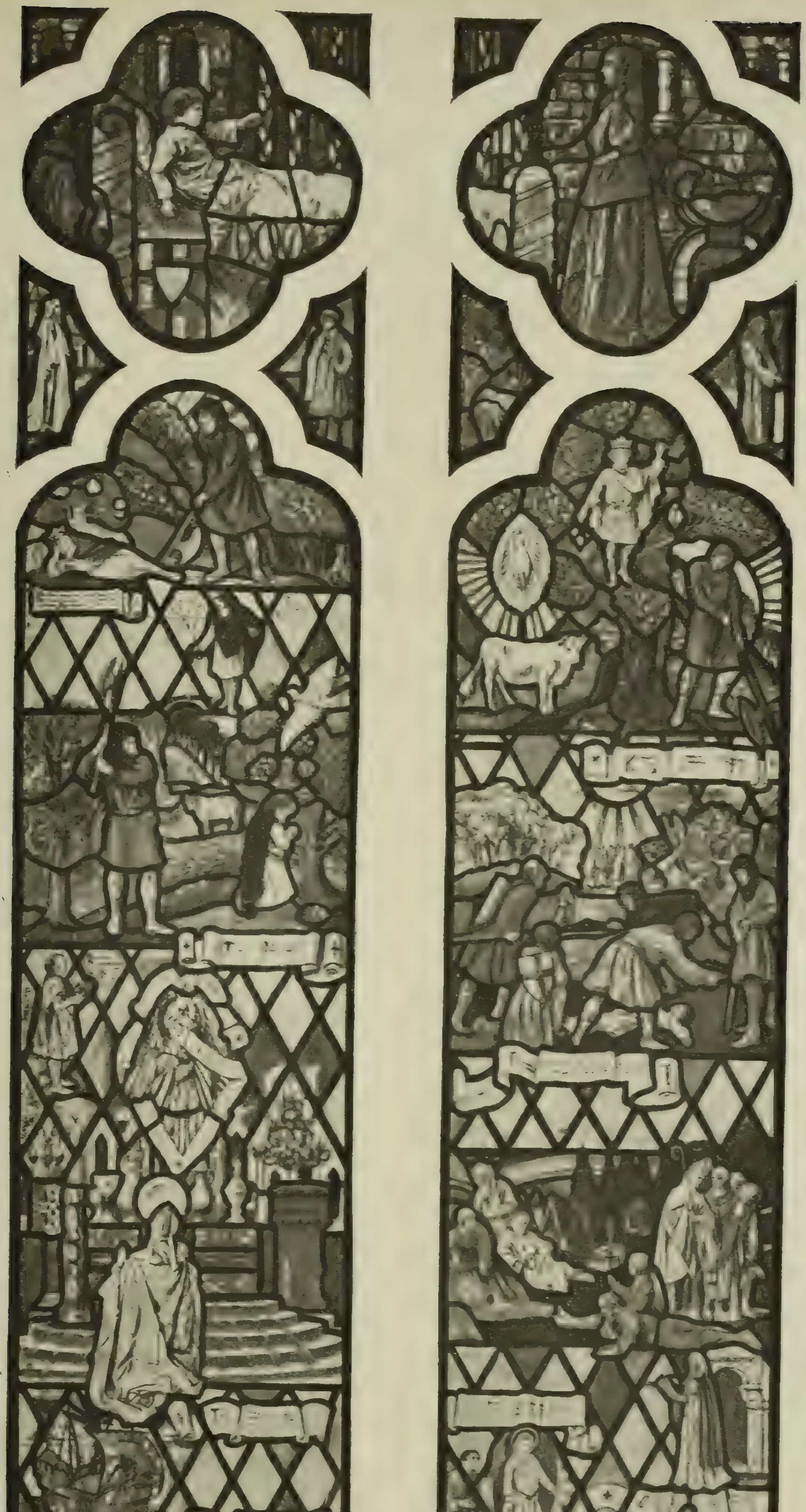

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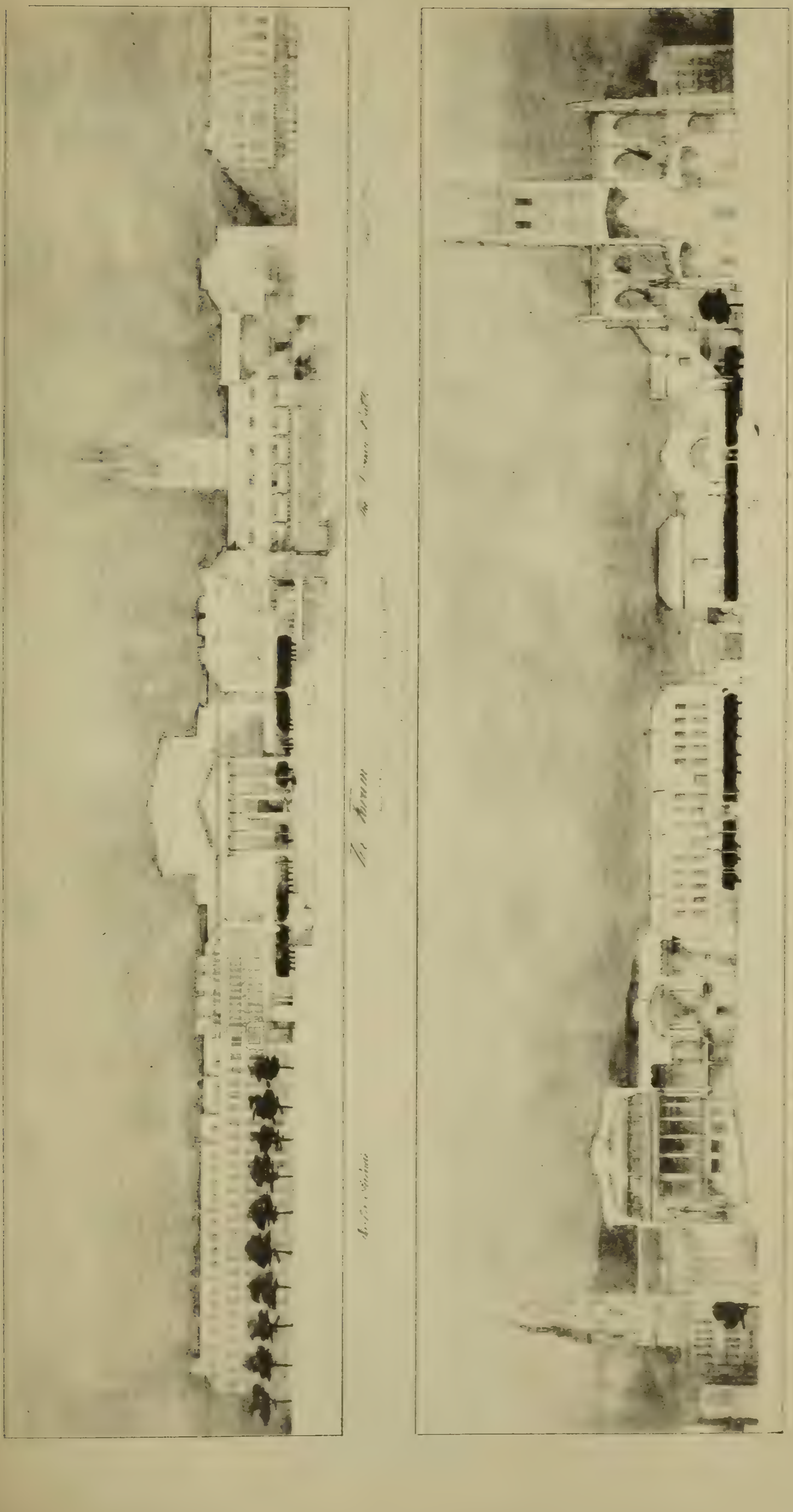

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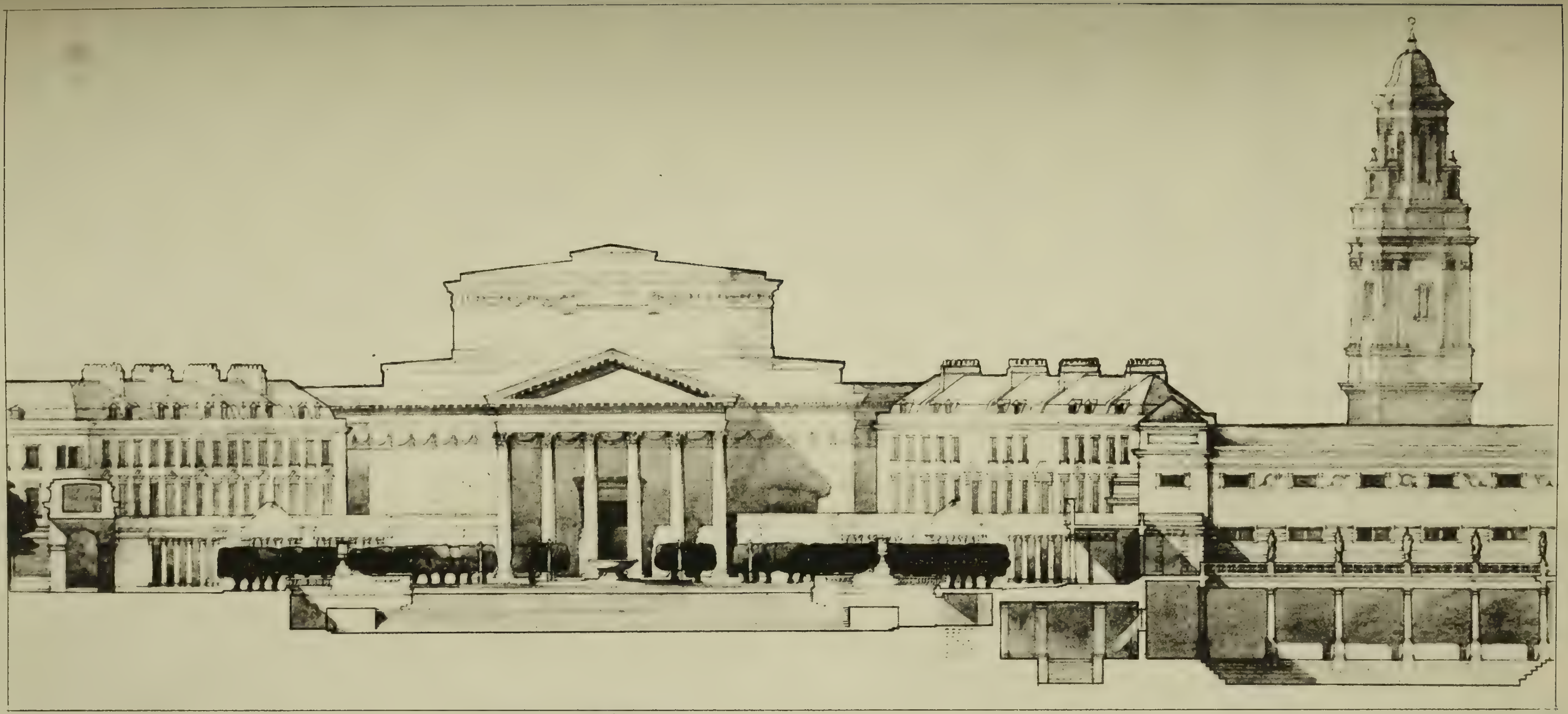

The Forum

SECTION FROM EAST TO WEST LOOKING SOUTH.

10 FEET. 5 0 10 20 30 40 50 FEET

PROPOSED IMPROVEMENT SCHEME, BATH.—BY MR. ROBERT ATKINSON, F.R.I.B.A. (MESSRS. ATKINSON & ALEXANDER).

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3815. MARCH 17, 1916.

OFFICIAL ARCHITECTURE IN INDIA.

THE architectural work undertaken by the Government of India is both important and interesting—firstly, because the Government of India is a benevolent despotism which directly undertakes and controls many branches of ivity left in this country to self-governing communities; ondly, because the needs of a population five times as merous as that of the United Kingdom have to be met; and, tly, because the nature of the problem makes its adequate ution exceedingly difficult. We have before us a copy of e annual Report on Architectural Works in India for the year 14-15, compiled by the Consulting Architect to the vernment of India, and its study adds further point to ticisms which we made in reviewing last year's Report* omments which were subsequently discussed in a letter eived from Mr. Begg which we gave in our columns.†

Our argument was that the architects employed by the vernment of India were too few in number to be able to deal an adequate manner with the enormous amount of work which ssed through their hands, and we urged that in the interests the public service and of architecture the conditions should be ered. Mr. Begg stated in his letter that “ no Government hitect in India is or can be the architect of any building in e full and individual sense that applies in private practice at me. His work is necessarily more or less of the nature of ollaboration with the administrative and executive machinery the Public Works Department as that exists from time to ne. . . . It is therefore an unsound basis on which to nd any criticism of the building work of the Department to mpare the amount of work with which one of our architects ay be associated to the amount with which the average chitect in private practice may be associated.” The writer nt on to say that the system was in a state of transition, d that the *Builder* would “ best serve the cause of architecture India by the attitude of encouragement displayed by certain its contemporaries towards the work of the Public Works epartment and, for the rest, by a suspension of judgment.”

We feel, on the other hand, that if, as Mr. Begg says, the stem is in a state of transition, presumably from a time in hich work was wholly directed, controlled, and designed by gineers to one in which work will be wholly directed, ntrolled, and designed by architects, we serve a useful purpose we are able to show reason why the transition period should abbreviated, and, admitting the argument that the work of chitects in the Public Works Department cannot be compared th that of the private practitioner, as it is more or less in the ture of a collaboration, the point still remains that the work hich has to be done by the twenty-seven architects whose mes are given in this Report is altogether too much be adequately dealt with by them, even if they are relieved of supervision and other administrative duties, which, we ther, is not entirely the case. The year's record of the work the Consulting Architect to the Government of India forms list of sixty-four buildings, including a Woman's Medical llege at Delhi, five post-offices, twenty churches, three railway-ations, seven science or college buildings, and a number of her works. The work dealt with by the Consulting Architect the Government of Bombay includes sixty-four buildings, any of great importance; that of the Government of Bengal clude fifty-two buildings; Madras, thirty-five buildings; urma, fifteen buildings of different sizes; the United Provinces Agra and Oudh, twenty-three buildings; Bihar and Orissa, any important buildings, besides work carried out in the ntral Provinces.

We are aware that these lists contain preliminary sketches for works which will be more fully considered subsequently and works which are being completed and really belong to former years; but, even assuming this and admitting that the architects employed have the assistance of engineers and draughtsmen and clerks of the works, it seems clear that the architects whose names are given in the Report are too few in number to cope with the mass of work described, and that this fact *is bound to militate against the quality of the work done, and that it would be in the interests of the Government of India to employ further architectural assistance.*

We illustrate four of the more important buildings completed in the year—two post-office buildings, the Prince of Wales Museum, Bombay, and the Government House at Puri. These are designed by four different architects, and give a good idea of the quality of work produced. Under the conditions which obtain the Government of India is to be congratulated because the standard of design is as good as it is, but we are sure that better results would be obtained from the recognition of the fact that good architecture is the result of thought and study, and cannot be produced unless the designer has ample time and opportunity for thought. The want of adequate consideration may be evidenced in defective planning, which means economical loss to the employer, and in poor architectural design, which entails a loss of beauty to the world.

In all these designs we see a curious note of hesitancy—they are neither Eastern nor Western in type—and in three out of the four definite and strongly-marked cornices and horizontal lines are, for some reason, entirely omitted. There is a more decided note in design in the examples of modern work carried out by the Indian master builders, which we give by way of comparison, and which with all their faults possess an interest which does not attach to the work of the Public Works Department. Mr. Havell* says, “ A department which exists *pro bono publico* should not be worked as it has been to the detriment of Indian craftsmanship; neither is it policy to allow the vested interests of a great State monopoly to prejudice Indians against the British Raj. Certainly there are useful things which the Indian builders might learn from co-operation with the Western engineer and architect. But why is it that in over fifty years, during which all the most important building operations in British India and in many of the Native States have been a close Government monopoly, not a single Indian master builder has been trained to understand these useful modern things? History proves that the Indian craftsman has always had the capacity for learning and even for teaching his teachers. But there is now no co-operation between the architect and the craftsman, and the education in architecture afforded to Indian students at Anglo-Indian Engineering Colleges is a relic of Victorian pedagogics of seventy years ago. . . . The curriculum is such that, if by any chance a young Indian master builder should enter one of these colleges, he would end by ceasing to be a first-rate craftsman architect and become a fourth-rate engineer.” We believe Mr. Havell is justified when he pleads for the co-operation of the English architect and the Indian craftsman, but that he is wrong in considering the working basis to be the native style. Equally we feel that the work of the Public Works Department is somewhat nondescript and indeterminate. The best medium would seem to be a vigorous and free rendering of the types of Renaissance employed with such success in the Spanish colonies of South America, Mexico, and California, varieties of which would be suitable for the wants of the climate of India, while they are European enough to be sympathetically expressed by our architects and elastic enough to lend themselves to the incorporation of much of the decoration and possibly the constructive features which are indigenous to the Indian peninsula. In the projected buildings of New Delhi, as far as we can judge from the sketch designs we have seen, there is the seed of such forms of design, which we trust will burgeon and grow, forming the foundation of a style which may be a fitting chapter in the development of Indian architecture, in the same way that Moghul forms were of the civilisation introduced by the Mohammedan rulers of past centuries.

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* “ Architectural Work in India,” February 5, 1915.

† “ Government Architecture, India,” March 26, 1915

* “ Indian Architecture.” E. B. Havell.

If the point of view we have advanced is reasonable, it is an additional reason why the Government of India should ungrudgingly recognise the services which have been performed for them by the architects they have employed within recer years, and give them conditions which will enable them t think out the great problems, æsthetic as well as practical, whic await solution. They have moved in the right direction i recognising that architects rather than engineers should desig buildings, and they will be advancing the great work government in India by making an æsthetic improvemer possible. The benefits of British rule in India need not l confined to the administration of justice and the promotion material prosperity, but will be of more value if they mak an appeal to the idealistic and æsthetic elements of India character.

NOTES.

The R.I.B.A. and its Elections.

WE are glad to state that at the special general meeting held on Monday it was unanimously decided that the by-laws should be suspended to allow the present Council to remain in office for a further year, thus obviating the necessity for the expense and labour entailed by an election at a time when a large number of members are away. Nothing of moment can be done until the war is over, and no election result would be really representative of the views of the whole of the members, apart from which much paper—white, blue, yellow, pink, and green—will be saved at a time when there is a shortage of paper and dyes! More than this, the staff of the R.I.B.A. will be relieved of unnecessary work when their activities are fully taken up with extra work incidental to the war and the special conditions it has brought about among architects. We trust in another year's time there will be nothing to prevent the holding of an election under normal circumstances, and one which will be more interesting than usual, for many live issues will come into being with the termination of hostilities, and it is to be hoped that commercial prosperity will follow in its train.

Westminster Cathedral.

THE mosaic tympanum over the main entrance of Westminster Cathedral has been completed, and the effect of Mr. Anning Bell's work can be seen. The central group represents God the Son, attended by the Virgin Mother and St. Joseph. Christ is seated on a throne, one hand raised in blessing the world, and is crowned by the cruciform nimbus. On the extreme left of the panel St. Peter is shown as the first Bishop of the Christian Church. On the extreme right of the panel is St. Edward the Confessor. The treatment of the figures is reticent and refined, and the colouring very pleasing when considered independently of its surroundings; but when these are taken into consideration we feel that the whole effect is too light in tone, which will be increasingly apparent as the surrounding stone and brickwork become darker. We question whether the external use of mosaic will ever be wholly satisfactory in our climate, and, although the tympanum was intended for mosaic decoration, we believe a far better result would have been possible had stone bas-reliefs in low relief been employed. This need not detract from our appreciation of a piece of work which is in itself fine and well considered; but the decoration of Westminster Cathedral will enable us to form an opinion as to whether marble or mosaic is suitable for the decorative schemes of any of our buildings.

Mr. Pennell's Criticism.

ONE of the most difficult questions to decide is whether our views on art and architecture are almost wholly the result of education and habit or whether they are founded on instinctive and racial feelings which it is unwise to attempt to override. The gist of Mr. Pennell's criticism as shown in his letter to us—and, we may add, in the notes in the catalogue of "Germany at Work"—indicates a dislike of Classicism as expressed in modern architecture and a suspicion of concealed construction. Mr. Pennell sees the soul of structure in things mediæval, in modern engineering, and in the work of Germany, and elsewhere we are inclined to believe he suspects an inclination to indulge in unmeaning shams. He probably expresses in his views on architecture what many of the public feel but give no utterance to. It may be that the modern architect is dangerously "off the rails" in his estimation of architectural values, and that the public want of interest in the subject is due to an instinctive dislike of an artificial standard rather than a normal indifference to a subject they do not understand. The question is one of very great interest, and we should like to hear more of Mr. Pennell's views than can be covered in the notes in a catalogue, however tersely and vigorously expressed. History shows how difficult it is for any generation to separate the prophet from the fanatic, and time is almost always necessary before we can judge fairly as to the rival claims of the discoverers of "truth."

The Land Taxes and Economy.

THE *Times* on March 2 called attention to tl extravagance involved in war-time by continuir the Land Valuation Department, which it asserte would cost £361,000 in the coming year to secu the collection of revenue which would not amou to £50,000. The actual expenditure of the Department is not tl only waste involved by this system of taxation, as it still impos expense on those who come under its long-drawn-out valuations, ar it still is detrimental in checking building and other industric The scheme of valuation was always chimerical, and if it had ev had any bottom in it the war has certainly knocked that botto out. What possible use can it be to ascertain the value of propert as on April 30, 1909? It would serve as useful a purpose to ascertai its value before the Flood. The war has put an end to "incremer value" for many years to come, and present conditions render it manifest injustice to tax undeveloped land. Undeveloped soldie are all that the nation are now considering. We cannot help feelir that the author of this system of taxation, who is now doing suc splendid service to the country, might be relieved himself if one his own bombs were to shatter this whole scheme of land valuatior but, however this may be, when the Government are looking f economies to be effected and men to be set free they cannot do bett than to evacuate the Land Valuation offices and order the sta "back to the land."

Churches of St. Nicholas and St. Peter, Liverpool.

AN Order in Council has just been made to constitu the old parochial Chapel of St Nicholas, whic stands by the riverside, near to St. George's landin stage, as the parish church of Liverpool instead St. Peter's, formerly the cathedral, as the Chap of the Virgin in the new cathedral is now opened ar dedicated for worship. The Order provides further for the pullir down of St. Peter's and vesting the site and churchyard in tl Ecclesiastical Commissioners. The church was built in 1704, ar is a good specimen of an ordinary tower church of that day, havir an interior with good woodwork and fittings of oak, and a tow surmounted with an octagonal turret and pinnacles. St. Nicholas' which at one time had four chantries, was erected in or about 135 and for more than 350 years was the only church in the origin chapelry of Liverpool in Walton parish. It was rebuilt (the tow and spire excepted) in 1774 after the Batty Langley Gothic styl The tower fell upon the congregation in 1810, and was replaced nir years afterwards with a notable one of modern Perpendicular Gothi crowned with an open-traceried spire, designed by Harrison, Chester, the composition being similar to that at St. Nicholas' Newcastle-on-Tyne.

Forthcoming Picture Exhibitions.

AN exhibition has been arranged to take place i London of the Italian Association of Etchers an Engravers (Associazione Italiana Aquafortisti Incisori). The Royal Society of British Artists ha offered its rooms for the exhibition. One half of tl net entries from sales will be devoted to the benefit of the Italia Red Cross. The exhibition will consist exclusively of original worl in engraving, etchings, aquatints, dry-point, woodcuts, lithograph and colour prints. The catalogue, at the wish of the London patron will have a notably artistic value as a permanent record of tl exhibition and of Italy; and we understand that his Excellency tl Italian Ambassador has signified his intention of being present the opening. The exhibition of the Aquarellisti Lombardi (Societ of Lombard Water-Colour Painters) has fixed its opening for April in the upper rooms of the "Cova" at Milan. This exhibition limited to Italian water-colour artists residing in Lombardy, althoug in some instances English water-colour artists of high standing ha received a special invitation to exhibit. Invitations have bee sent this year to Mr. John Sargent, Mrs. Laura Knight, Mr. Annir Bell, and Mr. T. Robertson. The standard of merit of variou exhibitions has been exceedingly well maintained in spite of tl existing state of war.

LONDON CHURCHES F WREN AND LATER RCHITECTS OF THE ENAISSANCE.

No. XXI.—St. Margaret Pattens.

Church of St. Margaret Pattens fronts od-lane near its junction with Eastcheap. s were formerly made and sold in Rood- he title of the church forming a reminder fact. The first church which stood on e was rebuilt in the reign of Henry VIII., ond church being destroyed in the Great The advowson of the church originally ed to the Nevill family, but in 1408 into the possession of Sir Richard ngton and other citizens, who subse- v bestowed it on the Mayor and onalty of London, and the rectory has hen continued in the gift of the Mayor orporation of London. The parish was with that of St. Gabriel Fenchurch after re.

church is not of great interest, being nplace in its detail and design and e in effect. It contains some good wood- of the usual character. The tower and re among the most interesting of Wren's , as he has here produced a design of character in terms of the Renaissance. elfry windows are square-headed and nded by an architrave, the angle les and balustrade are frankly Re- ce in detail, but the general effect of nposition is more suggestive of mediæval than that of St. Dunstan, St. Mary anbury, or St. Michael Cornhill, in churches Wren employed pseudo-Gothic It may be assumed here that Wren terested in seeing how completely the thic combination of a simple tower and ould be interpreted in another medium t the softening gradation of forms ced in later days.

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HE CARPENTERS' HALL LECTURES.

Sixth Spring Art Lecture arranged by the ters' Company was given in the Hall of mpany on the 8th inst. by Mr. W. Colton, A.R.A., whose subject was Effect of War on Art." In the course remarks the lecturer said:—

think I cannot do better than to take for xt of my discourse a quotation from 's "Crown of Wild Olives," which we robably all read and most of us forgotten many years of peace :—

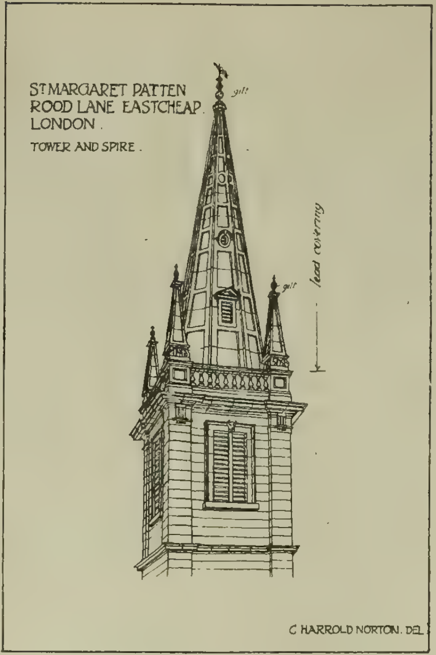
l the pure and noble arts of peace are d on war. No great art ever yet rose h but among a nation of soldiers. There art among an agricultural people if it s at peace. Commerce is barely con- with fine art, but cannot produce it. acture not only is unable to produce invariably destroys what seeds of it There is no great art possible to a but that which is based on battle.

e first dawn of it is in Egypt, and the of it is founded on the perpetual con- tion of death by the mind of a nation h the ruling caste were priests and the soldiers. The greatest works produced n are sculptures of their troops going out le or receiving the homage of conquered

om Egypt art passes directly into Greece, all poetry and all painting are nothing an the descriptive praise or dramatic ntation of war.

us," he proceeds, "the arts are ex- hed in the hands of the Romans and do e again until with Gothic chivalry there ack into the mind of Europe a passionate in war itself for the sake of war, and the fighting kings of France, England, pain and under the fighting dukeships izenships of Italy art is born again and o her height in the great valleys of rdy and Tuscany.

d from this time forward as peace is shed or extended in Europe the arts . They reach an unparalleled pitch of ess, but lose their life, enlist themselves at last on the side of luxury and various corruptions, and among wholly tranquil nations wither utterly away, remaining only in partial practice among races who like the French and us have still the minds though we cannot all live the lives of soldiers."



Ruskin, it seems to me, for the sake of fine language and complete ideas, was at times prone to overstate his case. Perhaps he underestimates the influence of religion on art, perhaps we shall see as we progress that his individual estimate of the art of countries and periods is somewhat prejudiced for the sake maybe of complete principles and rounded periods, and in his generalities he over-emphasises in some cases and does injustice in others. To my mind he despises unnecessarily the Roman nation, particularly in matters of art. I cannot but think in architecture, in their arches of triumph, the effect of war in the causation of fine art is most completely manifest. But with these reservations and in the larger view that Ruskin takes I agree with him, and I take his words, as I have said, in some ways as my text.

Photo.: Geo. Trotman.

Wren's Churches : St. Margaret Pattens, ' Tower-Street.

Of the horrors and terrors of war we all of us gathered here know enough, but we are inclined to forget that usually its effect is that of a violent tonic on the nation afflicted. Its influence is welding us once more into a social unit. It teaches us self-sacrifice for the good of an idea and of the community. It shows us clearly that selfish luxury and the accumulation of wealth are not the most important things in life or in the history of a nation. It stamps with a hall-mark what is the true gold and despises what we had begun to think real from its mere glitter. As far as art is concerned it was high time that war should come with its purifying fire. In some fifty years it had grown in Europe like unto a puffed-out and unhealthy fungus of enormous size, without beauty, without delicacy, and without health. A wave of diseased degeneracy had submerged philosophy, music, literature, and art to such a depth that, looking forward, I venture to prophesy that future centuries will gaze back with pity upon this period of mistaken morbidness.

We find perhaps in the German philosophers and musicians the first crystallised expression of this viciousness, but unfortunately we, with all other nations of Europe, cannot pretend that we are exempt. The morbid invention of the artistic mind is seen everywhere. We have Oscar Wilde, Aubrey Beardsley, and others; the Futurists, the Cubists, and whole schools of decadent novelists. We have had it also in the art of medicine, in the surgical rage for removing sundry portions of the internal organs, not when they were hopelessly diseased, but in a mad attempt to improve upon nature itself and in the taking of drugs for a special excitation of the human mind. In art, unfortunately, we cannot deny the technical skill of many of these unworthy craftsmen, and by the extent of that skill is increased the danger of the disease that has affected art.

Recently at a so-called important exhibition of sculpture a man of the world well known for his logical outlook on life, in reply to my demand, gave as his opinion that such an exhibition was to him "the direct road to hell." I am telling you this to show that the disease is fairly well recognised by others than myself and that those who know well the modern schools of thought and art cannot very well fail to agree with his verdict.

Of course you will find bordering upon the schools much art which is free from viciousness and merely foolish. An attempt to do without form in sculpture and poetry and the drama and without drawing and form in painting. A portrait may be painted with some straight lines of colour and a name, nothing else. Meaningless daubs and dashes of paint represent some profound philosophic thought which the innocent critic will discuss through columns of the credulous Press. The slides I now show you on the screen are quite innocently foolish, made for a foolish public which thinks that which it cannot understand must be profound.

In architecture we have perhaps kept saner than our neighbours and have not fallen to the new art eccentricities which are bad enough in any form of art, but in architecture meaningless desecration; doors and windows shaped like kidneys and other entrails of the human body are really anathema, but, alas! have not been unknown in Austria and Germany. In England we have run a little off the rails in producing architecture without much intention. We have elaborated the keystone to an awful extent. We use it without meaning and quite usually cut through lintels with it. We use arches without meaning simply as a decoration and we use pillars where there is nothing to support. We riot in niches containing nothing and plinths and bases with nothing upon them. The pediment has long ceased to be the end of a gable, and is more or less used at the fancy of the architect. Nevertheless, I think perhaps our architecture has kept itself healthier than most of the arts, and I certainly do not agree with the discovery of a well-known statesman that at last he understood why the blind walked the streets of London always looking happy, as they were unable to see its architecture.

In sculpture, among other crazes, we have been badly bitten by that of mutilation. We have almost decided that the complete work is not artistic, and that mutilations of a figure are. Sane England has been so far influenced that at an ordinary exhibition I have noticed that the great proportion of works were mutilated—of course, counting an ordinary bust or head as a complete work. Not content with a beautiful figure conveying some idea, it has been discovered by a certain school that to lop off a leg or two legs, perhaps an arm or two arms and a head, greatly enhances the value of an artistic production. At any rate, it leaves more to the imagination. Some bolder genius of this type has gone a step further and split off a fragment of a face for exhibition, another has a head without a crown. Another unfortunate female figure had the appearance of having been caught sitting on the railway line—she had suffered amputation of both legs at the most unfortunate section, so that two full moons or discs were presented to our gaze as supporting her in hardly an artistic or poetic fashion. Then we have had marble with black veins, fissures, and even pieces let in used from choice; point holes left showing, and so much marble rough and unfinished, that an ordinary reasonable being can see no reason for commencing.

I do plead for a sane future, when peace comes, in art, including architecture. Let us make things as beautiful as we can; let us make things as healthy as we can. I do not plead for an innocence that is childish and hypocritical, but for a delight in the sane, and that reticence that has always marked the supreme endeavour of mankind in the masterpieces of the mind. The actor to be great may not rant and rave from the beginning to the end of his act; his power must be used with discretion to be great; it must be well considered to be effective and to appear spontaneous.

All good design has always been and always will be founded upon the centuries of good design that have gone before us. Original work must come as a natural growth in continuation of what has gone before, never by way of antithesis. To teach our art worker originality of design, it is necessary that he should be acquainted with the finest designs bearing upon his work for generations past, otherwise we shall be trying to grow a flower without a stem, without leaves or a root, which is manifestly impossible.

Now, if we rapidly consider the influence of sacred and secular war upon the art of the nations we shall find that from time immemorial it has been the custom to incise or to cut in relief pictorial representations or inscriptions commemorating victories, campaigns, or incidents in those campaigns, such as kings returning from war, the siege and assault of cities, etc. In the British Museum you will find several sculptured panels from the palaces of the Kings of Assyria, dated some 700 years before Christ."

After a survey of historical art, illustrated by lantern slides, Mr. Colton concluded by saying:—

"And now I will close my very sketchy survey of the influence of war upon art by a word upon what is likely to happen in the future. If this century is to have a real record of the war through its memorials that shall be worthy of the nation, I imagine there is but one way. Never before, I am bold enough to say, has there existed such a mass of craftsmen anxiously waiting to give expression to those feelings of patriotism, sorrow, and hero worship, that, when crystallised, will produce its record in stone, marble, and bronze.

The one thing needful to success is trust in the artist whether he be sculptor, architect, or decorative painter. Those who have given their lives to the consideration of the subject are the only guides worth considering, and if you attempt to fetter them through timidity or by that so-called expert guidance that is without real knowledge and is founded on empty words then we shall fail.

A memorial must be a love gift spiritually ungrudged both by its promoters and by its artist, if it is to be valued by succeeding generations. A utilitarian value detracts from its spiritual quality. A triumphal arch should be boldly nothing but an emblem of triumph. A war memorial should express simply the nobility of the individual or the common sacrifice in terms of art. A thing of utility called a war memorial is but begging the question—beyond its usefulness it has no value in the history of the nation. Perhaps I have told you before that to commemorate Prince Albert a certain town in England proposed an elaborate scheme for a drainage scheme, to be called the Prince Albert Memorial Sewer. I need hardly say that we shall not on these lines successfully compete with the nations of the past.

We are fighting the greatest war the world has ever seen at untold sacrifice. Let us sacrifice a little more, and in our gratitude make sure that its commemoration shall stand for evermore a worthy tribute to our heroes."

THE LONDON SOCIETY.

The fourth annual meeting of the London Society was held on March 9 at the Rooms of the Royal Society of Arts, Adelphi, under the chairmanship of Sir Aston Webb, R.A.

In moving the adoption of the Report and accounts the Chairman said there was a balance on the right side, although it was small. They were just paying their way, and hoped the members by their support would enable them to continue to do so. They had lost the services of their Secretary, who had joined the forces, and amongst those they had lost by death were Sir Laurence Gomme, Lord Alverstone, and Mr. Florence. They were proposing to have a few lectures this year. Their principal work during the year had been the development plan of Greater London, which was progressing favourably. They calculated that it would cost them about £1,000, towards which they had received about £900. They would not only have a very fine plan when it was finished, but they would also have the satisfaction of knowing they had employed a certain number of men in preparing it during these trying times. When it was published they would have to issue a sort of handbook to describe all the improvements and suggestions made on the plan, and by the help of that he quite thought they would be able to make it generally attractive and interesting to the public. Another matter dealt with was that of Charing Cross railway bridge. It had been before the Society for years, but just at the moment it came up in rather an acute form. A few weeks ago Mr. Newton, the President of the Royal Institute of British Architects, and he, as representing the London Society, called attention in the Press to the fact that the South-Eastern Railway Company had promoted a Bill in Parliament for the strengthening of the bridge, and suggested that such an unsightly bridge should not be strengthened, but had better be removed. Charing Cross Bridge had been built at two different times, the first part being built lightly and the second portion more strongly. Owing to the increase in the weight of the trains the company wished to strengthen the side nearest Waterloo Bridge, and they had hit on the ingenious idea of so strengthening it with iron arches. The result would be that from the Waterloo side one would see an arched bridge, whilst from the Westminster side it would appear as a girder bridge with pontoons. One could hardly think such a proposal as that would be deliberately carried out. Fortunately the matter had gone to the House of Lords, and in the absence of Lord Plymouth, through illness, Lord Beauchamp moved an amendment to the effect that it be an instruction to the Committee to take into consideration the requirements of the traffic for the river at this point and the effect which the Bill if carried as proposed would have upon it; and to hear evidence from the Royal Instit British Architects, the London Society others. Lord Chilston, who represente railway company, agreed to the instru and said the company recognised tha bridge was unsightly and would be glad it removed. At the same time he p out that the railway company were not p thropists, and he (the speaker) was sure would misrepresent the South-Eastern Co by so describing them. The matter come up again, but if Lord Plymout successful in getting the instruction they would have reason to be satisfied a they had done for the moment. The done their work during the year quietl unostentatiously, but he hoped it had b some extent useful. Such a society coul act by suggestion. They might not b to carry all their suggestions, but the undoubtedly broaden people's intere London, and this might bring forth ver siderable improvement in the future. was only one London, and it was the of all who lived in it to make it beautif wholesome, and it was the aim of the L Society to do what it could in that way.

Sir J. Young, in seconding the motio marked that it was stated in a circular Society that the plan being prepared contain imaginative proposals. Londo lacked imaginative proposals for a ver time, and it was to be hoped that aft war a little imagination might be prac developed out of the plan for the develo of Greater London by the removal of s the eyesores and by adding to the me transit from one part to another.

Mr. Douglas Fox said the members Institution of Civil Engineers hoped able to co-operate with the architects and professional people in London to carry o excellent schemes the Society were propos

Mr. Paul asked if anything had been d get the unsightly ventilators removed the Embankment-gardens. Now the ground Railway was electrified they w longer necessary.

The Chairman said the Society ha proached the London County Council a Underground Railway Company, and bot agreeable to the removal of the venti It was the war which was responsible delay, but they would prod the auth up a little later on.

The Report was then adopted.

On the motion of Mr. A. Bowker, the members of the Council were re-elected Messrs. W. Vernon Crompton and P. F as additions.

Mr. Carmichael Thomas, in propos vote of thanks to the Chairman, referred great interest Sir Aston Webb took Society, and said it was due to him tha got the money to carry out the work paring the map.

The Chairman, in reply, said that he had not sufficiently thanked the dr men for the work they had done. It difficult task and they were doing it ext well.

BOOKS RECEIVED.

The Gravels of East Anglia. McKenny Hughes, M.A., F.R.S. (L Cambridge University Press. 1s. net.)

Analytic Geometry. By H. B. (London: Chapman & Hall, Ltd. 6s. 6 New York: Jno. Wiley & Sons.)

The Orders of Architecture. Benton Greenberg. (London: Chapn Hall, Ltd. 2s. 6d. net.; New York Wiley & Sons.)

Allan's Housing of the Working-(Acts. Fourth Edition. (London: worth & Co. 12s. 6d. net.)

The Relation of Sculpture to Ar ture. By T. P. Bennett. (London; bridge University Press. 15s. net.)

Hydraulic Flow Reviewed. By Barnes. (London: E. & F. N. Spon, Ltd. net.)

LAW REPORTS.

KING'S BENCH DIVISION.

(Before Mr. Justice ROWLATT.)

chitect's Plans and Light Infringement: ote v. Minister & Co.; Minister & Co. v. Northcote & Nixon.

was an action decided by Mr. Justice tt in the King's Bench Division on last, March 10, after a week's hearing, raised points of great importance bear- the duties of architects in regard to the ation of plans where claims affecting of light were likely to arise.

plaintiff, Mr. Arthur Edward North- rchitect, 19, Tothill-street, Westminster, Messrs. Minister & Co., Ltd., fashion- printers, 40, Great Marlborough-street, inster, to recover £347 11s., on account fessional services in the preparation of for the defendants for buildings at Nos. d 56, Poland-street, Westminster. The ants alleged that the plaintiff warranted s plans that the buildings would not ge rights of light and air vested in ouring owners, and that this warranty ot carried out, and the defendants set counterclaim against Mr. Northcote and gainst Mr. Samuel Nixon, who had acted veyor for them, and who introduced Mr. cote as architect, claiming damages ting to £225, part of which had been it was said, in settling the claims of ours.

Gibbons, K.C., and Mr. Brandon were e plaintiff; Mr. Holman Gregory, K.C., Mr. Alex. Neilson were for Messrs. er & Co.; and Mr. Hollis Walker, K.C., Ir. Woodgate were for Mr. Nixon.

case was heard for a whole week, a mass of evidence being called.

substantial allegation made by Messrs. ter & Co. was that, on the faith of the of Mr. Northcote, they entered into n indentures of lease for buildings at 55 and 56, Poland-street, and it was ed that Nos. 55 and 56 interfered with r and light rights of the Roman Catholic s in the rear, and that No. 55 interfered similar rights of owners at No. 54. s. Minister & Co. eventually called in eo. Hubbard, F.R.I.B.A.

Northcote, by his reply, denied the nty alleged, and said that it was always stood that certain claims for air and would have to be dealt with, and a ation that the plans might have to be ed on account of the adjoining owners he understood, provided for in the ct with the lessors.

Nixon and Mr. Northcote gave evidence, or the other side Mr. Hubbard's evidence idavit was submitted, and various archi- were called to say that the plans did ge air and light rights. Mr. Guildford the solicitor for Messrs. Minister & Co., gave evidence.

Justice Rowlatt, in delivering judgment, hat in regard to No. 56 he thought there n infringement of the lights of the Roman lic schools, and they would have obtained junction against Messrs. Minister & Co. matter had been proceeded with. He not think that a professional man was to be infallible, but he had to be careful iligent. The case for Mr. Northcote was e was authorised to chance the matter of ights; but he was of opinion that Mr. cote misjudged the situation—he did not apply himself to the angles of light, and ossible claims of the schools were not taken into consideration. It was not a likely thing that a client would say to his ect, "I will chance it," in the sense that were to be drawn regardless of other e's rights; but it was likely that a client point out the difficulties to the archi- but tell him to go on, especially at an stage, but without limiting the architect's ation to take care. Therefore he held ase against Mr. Northcote in regard to 6 was made out.

to No. 55, the facts showed that difficulties foreseen, and his view was that when ctions were given to Mr. Northcote it understood that openings were left for fications in the plans. It was understood some little changes might have to be , but it was not intended that the plans to be so provisional that it might be sary to make alterations that amounted to lding or the making of an entirely ent place. He held that the case as to 55 against Mr. Northcote was also made

As to the counterclaim against Mr. Nixon, he thought this failed, and he could not be held liable. He gave judgment for Mr. Nixon with costs.

The accounts as between Messrs. Minister & Co. and Mr. Northcote were subsequently gone into. Judgment was entered for Mr. Northcote on his claim for fees for £256 18s. 1d. (less £96 paid), and costs, except as to the issue of negligence, as to which Messrs. Minister & Co. were awarded the costs, and judgment was entered for Messrs. Minister & Co. on the counterclaim for £375 6s. 2d., and costs.

Mr. Gibbons, K.C., said that the question of the duties of an architect were involved here, and as in regard to No. 56 it was a very fine point, he asked for a stay, as it might be desired to take the opinion of another court. The application was granted on terms.

OFFICIAL REFEREE'S COURT.

(Before Mr. MUIR MACKENZIE.)

Action for Dilapidation: Bradshaw v. Kyffin.

THE plaintiffs in this case are the trustees of certain property in Holbrook-street, Homerton, and they claimed possession of six houses in that street by reason of alleged breaches of covenants of a lease to repair. The leases were dated July, 1844, and February, 1846, for terms of seventy-eight years, and contained the usual covenants for repairs, with a proviso for re-entry in case of breach. The defendant was a sub-lessee, and notices were served upon him owing to his failure to keep the houses in repair, particularly in regard to the pantile roofs, which, it was said, were in such a condition of dilapidation as to be detrimental to the property generally, as there was danger of the rafters rotting. The notices were served under the Act on May 17, and a period of three months was fixed within which to do the repairs, and something had been done; but plaintiffs' counsel said that it was not nearly sufficient.

The defendant admitted the title, and paid into Court a sum equal to the ground rent due to date, but denied that he had neglected to repair, and claimed relief under the Act.

Mr. Harvey Dyball, architect and surveyor, of 35, Bucklersbury, who surveyed the premises, gave evidence as to the condition in which he found them. He stated that for seventeen or eighteen years he had acted as surveyor to the plaintiffs' estate, which consisted of many hundreds of houses in various parts of London.

Mr. J. P. G. Kyffin, surveyor and estate agent, of 38, Launston-road, Hackney, son of the defendant, was one of the witnesses for the defence, and his evidence was to the effect that the houses were not in the dilapidated condition alleged by the witnesses for the plaintiff.

The Official Referee, in giving judgment, said that the covenants of the lease clearly gave the plaintiff the right to re-enter in the event of a breach of the covenant to repair; but such breach had not been proved. The houses, which were a small property, were managed by the defendant's son, who apparently kept, besides an estate office, an establishment for carrying on repairs, and at the time employed a builder accustomed to do work in the neighbourhood, who from time to time repaired the houses which were the subject of action. In 1915 the plaintiff's surveyor, Mr. Dyball, surveyed the premises, and found that certain repairs were wanted, and he served notices accordingly. Repairs were done under the direction of Mr. Percy Kyffin, and he thought that all the requirements had been complied with; but Mr. Dyball again inspected the premises, and furnished further particulars. In all, the repairs done by Mr. Kyffin amounted to £63; but the plaintiffs' case was that as little was done as possible, and what had been done had been badly done. The chief complaint was in regard to the roofs, and as to these the defendant proved that he had put them in repair, and had made them watertight in August, but said that the subsequent leakage was caused by concussions which had occurred. They were old houses, and he (the Referee) was not surprised that they were shaken by the explosions. He could not find that the defendant ought to be turned out because he had adopted a method of repairing the roofs which was not in accordance with the views of the plaintiffs.' On the whole he held that the action failed, and the defendant was entitled to have it dismissed. That, however, did not prevent further action being taken in the event of the repairs specified not being done. The defendant ought to have the costs, but in awarding them he was going to make an unusual stipulation. The plaintiffs were entitled to have the premises put in repair, and he would not draw up the order for a certain time, giving the defendant liberty to apply to have the order drawn up when he was able to support it by an affidavit that the roofs had been properly repaired. When drawn up, the judgment would be for the defendant, dismissing the action with costs.

Case under the London Building Act, 1894: Notice of Work.

AT Greenwich Police-court on the 10th inst. Messrs. John Appleby & Sons, Ltd., builders and contractors, were summoned by Mr. B. Greig, District Surveyor for Deptford, for failing to serve a building notice in respect of work executed by them at their premises in Silwood-street, Southwark Park. A brick-built saw-mill partly erected about 1907 had not been completed, and one end was enclosed with a temporary wood frame, covered externally with felt. In the temporary end enclosure were certain doors and windows.

The new work, in respect of which the summons was issued, consisted of three wood posts supporting a beam at a height of about 10 ft. above the ground, from which wood rafters rose to a height of about 15 ft. against the temporary end. The span of the rafters was about 21 ft., and the structure covered an area of about 21 ft. by 33 ft. On the rafters open boarding was laid, and two tarpaulin sheets were spread thereon and tied at the edges. The tarpaulins could be taken off without affecting the timber construction. The purpose of the work was to provide shelter for work to be done at a machine-saw driven by a belt from shafting carried through the temporary end of the saw-mill. The shelter was unenclosed at the sides except where it abutted against the temporary wood and felt end, which extended to a greater height than the shelter.

The defendants pleaded not guilty. It was contended that the work formed an addition to the saw-mill, and that even if it were temporary, as the defendants stated, it should be licensed by the London County Council under sect. 83 of the London Building Act, 1894.

Mr. G. Hay Halkett decided that notice should have been served, and fined the defendants 2s. 6d. and £1 1s. costs.

◆

PUBLIC WORKS IN AUSTRALIA.

THE Commercial Intelligence Branch of the Board of Trade is in receipt of an official statement giving details of items authorised by the South Australian Public Purposes Loan Bill, 1915, which provides for a total expenditure of £9,266,500; the following particulars of special interest are extracted therefrom:—

	£
Railways—	
Rolling stock, locomotives, machinery, and appliances for locomotive workshops, accommodation, line alterations, etc. ...	1,584.700
Railway construction	1,962.000
Harbours—	
Deepening and improvement of harbours at Port Adelaide, Port Pirie, and at outports	272 000
Murray River improvements... ...	500.000
Water supply works in districts of Adelaide, Baroota, Country, Beetaloo, Bundaleer, Barossa, Millbrook, Warren, and Pekina Creek	1,465,000
Drainage Works—	
Drainage works in South-Eastern District	300.000
Adelaide sewers	200,000
Jetties and lighthouses	42,000
Buildings—	
Erection of schoolhouses	140.000
Police barracks	22.000
Explosive magazines	2,000
Produce stores	20.000
The Magill Home	52,000
Roads	173,000
Miscellaneous works—	
Irrigation and reclamation of swamp land	300 000
Advances to settlers' and homes' funds	600 000
Sheds and tanks for settlers	25.000

GENERAL NEWS.

Presentation to Sir A. Geikie.

The bust of Sir Archibald Geikie by Professor E. Lanteri is now finished, and it is to be presented to the Board of Education.

The Friday Club.

The painter members of the Friday Club will hold their annual exhibition at the Hall of the Alpine Club, Mill-street, Conduit-street, Bond-street, W. It will consist of oil and water-colour paintings, drawings, etchings, etc. The exhibition will open to the public on Monday, March 20, and will continue till Saturday, April 8.

Patronal Window, St. Kenelm's Chapel, Clent.

In reference to this illustration, which we gave in our last issue, we have been asked to point out that the window was the first war memorial of any kind erected, and it was dedicated by an anonymous donor to the memory of children who had fallen or would fall in the present war, the subject of St. Kenelm, the child martyr, being a most appropriate one for the purpose.

Industrial Development.

Mr. Harold Cox, in an address at the Institution of Civil Engineers recently on "Industrial Development," pointed out that after the war there would be hundreds of thousands of men returning to this country looking for work, and changes would occur which would have a tremendous effect upon our social life. All important was it we should look ahead and act at once. Vague talk would not put the necessary machinery in motion. The Government Consular system he considered of little good, and he suggested the establishment of an organisation, representing practically all the trade of the country, which would develop our trade and commerce all over the world. Road-making and planning of towns and cities should be considered, and he could imagine no finer task at the end of the war than the reconstruction of the capital of the Empire.

Town Planning in Babylon.

Professor W. L. King, Assistant Keeper of Egyptian and Assyrian Antiquities in the British Museum, gave the second of a series of lectures on "Recent Excavations in Mesopotamia" at the Royal Institution recently. In recent excavations, he said, portions of the older city of Babylon had come to light, and it was shown that as early as the second millennium B.C. the streets were carefully laid out, the main thoroughfares running straight through and parallel to the river, and the others crossing them at right angles. We had in Babylon recovered what was undoubtedly the earliest attempt at town planning on scientific lines. It was only when we came to the Babylon of Nebuchadnezzar and his successors that we found traces of any building of a public character, and here the excavators had had some striking successes and one equally striking failure. They had recovered and identified Babylon's great temple, the throne of Marduk, the city god, close to the old foundations of the temple tower, the original of the Tower of Babel. They had found the gate of Ishtar, which spanned Babylon's sacred way. They had recovered Nebuchadnezzar's palace, and it was possible now for anyone to stand in the ruins of the throne-room and note the recess in the wall in which the throne was placed, or tread the endless corridors and chambers of the palace. It was in this area that the excavators made their one great failure—their proposed identification of the hanging gardens of Babylon. The descriptions left by classical writers suggested that these royal gardens towered on high above the surrounding buildings, and it had been suggested now that they lay in the north-east corner of the palace, supported by massive vaulting, but lying deep below the palace level. On this theory the gardens would have formed a sort of sunken courtyard, rather like some of our modern winter gardens. Such a construction could have caused little wonder, and it seemed more probable that the subterranean building was simply a palace granary.

Institution of Civil Engineers.

At an ordinary meeting of this Institution held on the 7th inst. Sir John Wolfe Barry, K.C.B., LL.D.(Glas.), F.R.S., was elected an honorary member, and Mr. Alfred Cecil Eborall a member. The election of forty Associate members and admission of two students was also reported.

National Gallery Purchases.

It is announced that purchases have been made by the trustees of the National Gallery:—1. "Madonna and Child," by Masaccio (from Brant Broughton), purchased with the generous assistance of the National Art Collections Fund, who contributed half the purchase-money. 2. "La Collation," by Pieter de Hooch. Both these pictures were purchased out of the interest of the Temple West Fund. The latter picture will be on exhibition in Room XIX.

Royal Society of British Artists.

In the galleries of the Royal Society of British Artists, in Suffolk-street, Pall Mall, an exhibition is to be held of the Italian Society of Etchers and Engravers in aid of the Italian Red Cross; and of the sketches by members of the Royal Society of British Artists, in aid of the Charing Cross Hospital Fund for Wounded Soldiers. The exhibition will be opened by his Excellency Marchese Guglielmo Imperiali, the Italian Ambassador, on Saturday, March 18. The exhibition will remain open until May 13.

Development of Cement-Making Industry in the Urals.

The British Vice-Consul at Ekaterinburg (Mr. T. H. Preston) reports that the first cement works were opened in the Urals at Neviansk (Ekaterinburg-Perm Railway) during 1914. Formerly the Urals as well as the whole of Western Siberia were dependent on cement transported from Russia from the Volga works at Saratov. The whole production of 500,000 barrels (about 83,333 tons) was sold during 1915. The Ural district is likely to be in the future a very extensive market for cheap cement, especially in view of its employment in the making of ferro-concrete, which is now beginning to be extensively adopted both in private buildings and in various works and factories. It is only since the opening of the new cement works in the Urals that ferro-concrete has become practicable, and it is likely to become very popular both in the Urals and Siberia. It may interest architects and builders in the United Kingdom to know that architectural and building firms, among whom Germans used to predominate, did considerable business in the Ural district in ferro-concrete structure up to July, 1914.

The Peabody Trust.

In the fifty-first annual Report of the Governors of the Peabody Donation Fund it is stated that the surplus income for the year from rents and interest was £42,453 1s. 9d., as shown by the accounts, this return being 2·25 per cent. on the capital of the fund at January 1, 1915, against 2·48 per cent. last year.—The capital expenditure on lands and buildings to the end of the year was £1,879,379 17s. 10d.—The ten blocks of self-contained tenements at Rodney-road, Walworth, were opened in March and are fully occupied.—An additional block of self-contained tenements is being built on the Bethnal Green Estate, together with hot and cold baths and a steam laundry.—The agreement with the Bridge House Committee for the purchase of a site adjoining the present Southwark Estate has been signed and sealed. Owing to the war the completion of the transaction has been postponed by arrangement with the Bridge House Committee. A site has been purchased adjoining the Camberwell Estate, on which four blocks of self-contained tenements can be built.—At the end of the year the Governors had provided for the artisan and labouring poor of London 15,885 rooms, including those occupied by the superintendents and porters, besides laundries and lavatories. These rooms provide 6,634 separate dwellings, viz., 300 cottages of five rooms, twenty-three tenements of five rooms (superintendents' quarters), 240 tenements of four rooms, 2,200 of three rooms, 2,778 of two rooms, 1,084 of one room, and nine shops with sixty-one rooms attached.

The Port of Havre.

The Commercial Intelligence Branch of Board of Trade is informed by the For Office as follows:—The French Governn desire it to be known that the Port of H is much congested, and it is consequ desirable that British exporters of goods Switzerland should send, in their own inter as little as possible by this route for the pres meantime, efforts are being made to relieve congestion.

The Great Tympanum at Westminster Cathedral.

The mosaic tympanum over the main d of Westminster Cathedral has now been exp to view. The great semicircular space five figures. The central group represents the Son attended by the Virgin Mother by St. Joseph. Christ is seated on a thr one hand raised in blessing the world. the extreme left St. Peter is shown and the extreme right St. Edward the Confes It is the work of Mr. Robert Anning A.R.A., of the Glasgow School of Art.

Demolition of St. Peter's, Liverpool.

The Church of St. Peter, Liverpool, w has for so long been the parish church of city, is to be demolished. The Order in Cou which decrees that the demolition is to carried out will not be carried into effect u the cathedral is completed, so that un existing circumstances the old church has a few more years to stand. When the chu is demolished it is supposed that the site be sold for secular purposes, the proceeds b devoted towards the cathedral endowmen

The Athenæum Index.

The Athenæum Subject Index to Periodi covers some 400 magazines and proceeding societies. The work of indexing is underta voluntarily by a number of librarians; publication is not issued for profit. The cur issue deals with the subject of Education, is the seventh of a series of twelve class covering the year 1915. An annual consoli tion will be issued later. The present contains 517 index entries, selected from journals, and distributed under 228 headi with many references in addition.

The English Chancel.

The Oxford University Press will pub shortly another volume by Mr. Francis B in the "English Church Art" series entit "The English Chancel." A detailed hist is given of the English altar and its succes the Communion table; also of the seventeen century controversies by which altar rails w introduced and placed sometimes on all f sides of the table, sometimes on three sides, a finally on the west side only; with this incorporated an account of the various for of the English reredos and other accesso of the altar. Then follows a description the piscina in both its forms, the crede shelf, and the sedilia. The existing examp of the Easter sepulchres are illustrated, ritual of Passiontide described, and the sed and piscina and other contents of the Engl chancel are fully illustrated.

Portland Cement Production in the U.S.A., 19

H.M. Consul-General at Chicago (Mr. H. Nugent) reports that according to an estim of the output of Portland cement in the Uni States in 1915, made by the United Sta Geological Survey, the production was ab 85,732,000 barrels (of 380 lb. net), as compa with 88,230,170 barrels in 1914, a decrease 2·8 per cent. The stocks of finished cem at the mills amounted to about 11,583, barrels as compared with 12,893,863 barrels 1914, a decrease of 10·2 per cent. The sli decrease in production and the considera decrease in stock indicate greater caution in industry, which in the preceding few ye showed a tendency towards over-producti The general prices averaged a few cents lo per barrel in 1915 than in 1914, althou towards the end of the year they were c siderably higher. The statistics show t the general volume of business was about same as in 1914. The outlook for 1916 stated to be brighter than for several years.

BOOKS.

Arts in Early England. By PROFESSOR
LDWIN BROWN. Vols. III. and IV.
Saxon Art and Industry in the Pagan
riod."

E two volumes comprise a peculiarly
ugh and searching analysis of the subject,
have been prepared with a keen regard
accuracy and clear exposition. In his
tory note the author explains the plan
which the work has been constructed
his methods of reference, and he may be
atulated on having presented an immense
of information in a convenient form for
tudent, who will not fail to recognise the
of the book as a complete and exhaustive
of reference.

e art of the Anglo-Saxons is probably
tle studied and understood as any of the
ds and phases of artistic expression, and
ssor Baldwin Brown has done a great
e in illustrating its scope and peculiarities
such thoroughness and minute description.
illustrations are prolific and are photo-
ic, and are not only very clear but in
cases the scale is indicated, an important
l where ornament is concerned.

e author, in the Preface, alludes to the
lar estimation of the Anglo-Saxon as of
lid and inartistic race, but even a cursory
ination of the evidence in these volumes
serve to expose the fallacy of such a view.
the whole, while the art of the Anglo-
ns might in a degree be described as
aric, it compares with the general mass of
ish ornament of the present day to the
ment of the latter; there is a directness
urpose and a logical simplicity of design
craftsmanship displayed in many of the
ts illustrated in this work which seem
e generally lacking to-day. This is par-
arly noticeable in the fibulæ and similar
les of dress or jewellery. The author has
careful in tracing the origins of the orna-
al forms and motives characteristic of
work of the Anglo-Saxons, and while it is
itted and obvious that most of these
ves have a precedent or parallel in the
of the Romans, the Celts, etc., he very
y claims a definite degree of originality and
l characteristic for the Saxons.

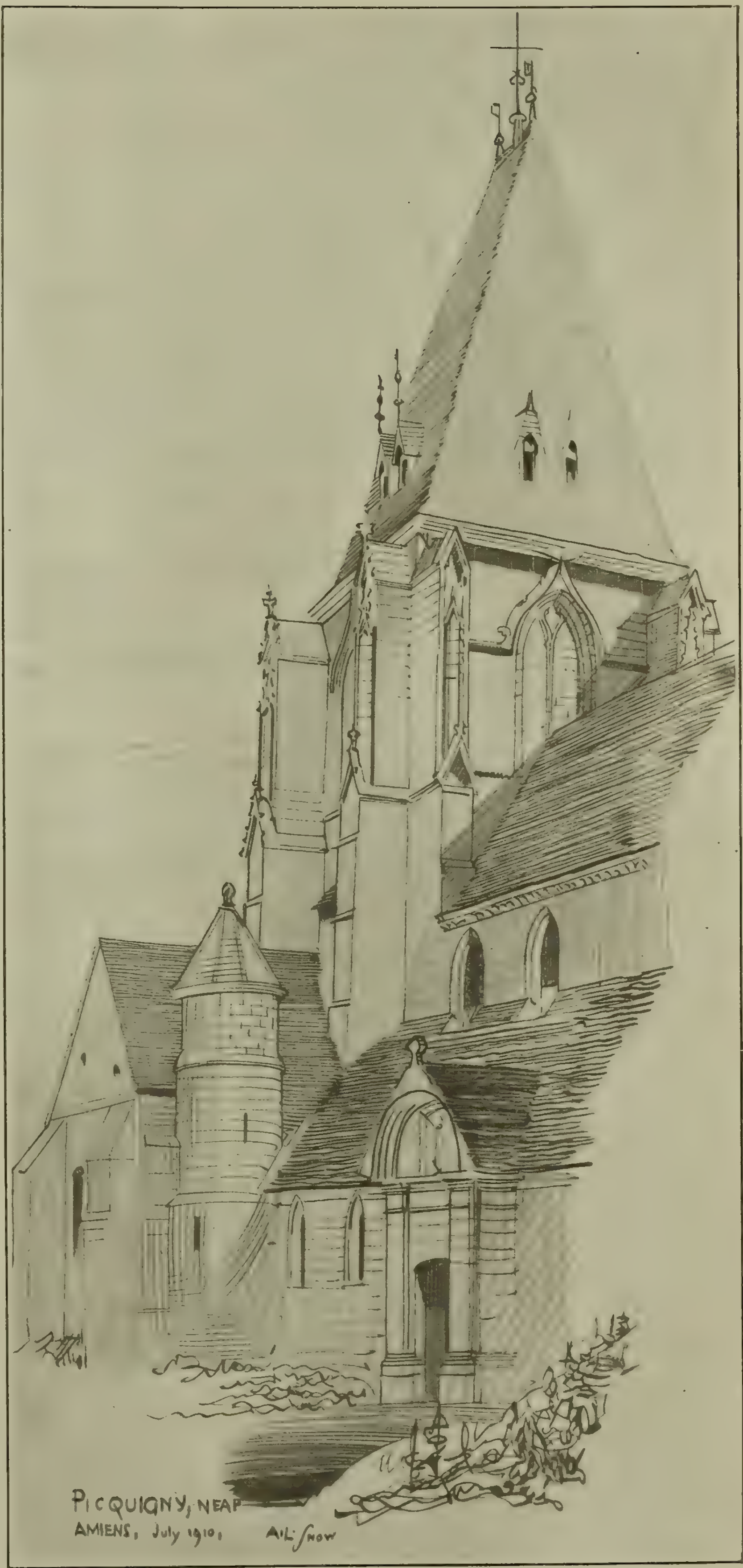
very large proportion of the objects illus-
d consist of fibulæ or brooches, and other
s fastenings, and coins, and those whose
aintance with the art of this period is
rficial and whose interest has been only
al will be astonished at the degree of
nical skill and artistic ingenuity displayed
the Anglo-Saxon craftsmen. In some of
borrowed motives, notably those derived
Roman sources, there is a certain tendency
rds coarsening, but on the whole the
rtures from precedent are marked by a
ur and purpose which entitle them to
ideration as genuine works of art.

s the author remarks, nearly all the objects
red to and illustrated in these volumes
been discovered in Anglo-Saxon burial
nds, hence the preponderance of brooches
articles of personal adornment. Some
ters are devoted to these burial grounds,
to the history and locality of the migration
settlement of the races in question, and,
ough of more interest to the antiquary
the art student, these considerations are
tial to the right understanding of the
ect and throw considerable light upon it.

x chapters come under the heading of
b Furniture, and deal successively and
etail with the classes of objects found in
tombs and graves. A valuable analysis of
technical processes employed is given in
pter VI., and is especially instructive and
ul in forming an estimation of the artistic
e and significance of the objects under
ussion.

ith regard to questions of design and
stic motive, in his desire to trace origins,
ses, and precedents the author is perhaps
ned to give too little credit to spontaneous
inality. Take, for example, the spiral, a
mon natural form which may in many
s as well owe its origin to the mind and
y of individual craftsmen as to a deliberate adaptation from precedents in artistic expression.

Amongst the profuse collection of illustrations of these English works of long ago there are too many examples of excellence to make individual reference desirable, but mention may be made of the Kingston Brooch, admirably shown in colour on the frontispiece, and the cruciform fibula illustrated on Plate XLIV., both of which in themselves are sufficient to command our respect and excite interest in the period, and the people who produced them.



From a sketch by Mr. A. L. Snow. (*See* "Some Sketches in France," *page* 216.)

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ILLUSTRATIONS.

Some Sketches in France.

BEAUVAIS.

THE cathedral was begun in 1225, but in 1284 the choir vaults fell in and completely ruined the building, which had to be rebuilt. Work on the transepts was only commenced in 1500. They were finished in 1548. Not content with so vast an achievement, the erection was commenced of a great tower over the crossing, 153 metres high. To attempt this before having even started the nave proved a costly blunder, as the piers of the crossing, lacking the necessary abutment, yielded, and the tower and all came crashing down in 1573. The nave never was commenced, and the building as it now stands ends with the transepts.

All views, all recollections of Beauvais are dominated by this building, so vast even in its incompleteness, so singularly satisfactory, though flamboyant, achieving an immense height without the lean and spiky appearance that so often accompanies it, and skilfully preserving everywhere the scale set by the entrance doors and the great flight of steps, so unusual a feature in a Gothic church. Nowhere does one lose consciousness of its immensity. The great transepts are splendid examples of flamboyant architecture at its best. In general appearance they are the same, but the south one is the richer and finer of the two, skilfully designed in receding planes. The great window forms the chief feature, its flowing tracery properly filling the circle without creating awkward shapes and angles, as at Amiens and Rouen. The depth of the two planes of tracery and the huge covering arch have more than a little to do with its splendid appearance.

The transept is flanked by octagonal turrets, which only slightly diminish until they reach the gable, where they terminate in little pavilions, Renaissance in detail and outline, but perfectly harmonious and appropriate in appearance. The whole composition evidences an extraordinary agility in design, and represents one of the most truly impressive and great achievements of any time. Whether regarded as architecture or engineering, it is a never-ceasing wonder, a triumph in each field, an everlasting glory to the town that built it.

EU.

Eu, locally known as La Ville d'Eu, is near Dieppe, and, although little known, possesses much of real interest. Our illustration shows the apsidal termination to the fine church, the nave of which is one of the earliest Gothic monuments in Normandy. It was probably commenced about 1186, after the death here of St. Lawrence, Archbishop of Dublin, while travelling in France. It was probably finished about 1227. The exterior of the nave, eleven bays long, is severely simple. The interior is an unusually pure example of early Gothic, with a nave arcade of a design only found in one other church in France, viz., Rouen Cathedral. It has two rows of superposed arches opening into the aisle.

The choir and chevet are later additions in the flamboyant style.

PICQUIGNY.

Picquigny, a few miles from Amiens, has a church which is a medley of architectural fragments of the thirteenth, fourteenth, fifteenth, and sixteenth centuries. It has a slated spire and fine tower, with angle buttresses treated in a bold and interesting manner. On the north the tower is well led up to by a low transept and turret. The exterior of the nave is very plain; on its north side is a pretty little Renaissance doorway, with circular pediment and sloping tiled roof over, which gives it an oddly humble appearance. The west door has also pilasters and a cornice. The interior is of little interest. There is an unvaulted twelfth-century transept.

There is also a ruined castle of great interest at Picquigny.

Wren's Churches.

WE give reproductions of plates from "The Churches of Sir Christopher Wren," by J. Clayton, published by Messrs. Longmans, Green, Brown, & Longmans, which we give by the courtesy of Messrs. Longmans, Green, & Co. They illustrate St. Mary Abchurch, which we described in our New Year's number, St. Margaret Pattens, notes on which will be found on page 211, and St. George, Botolph-lane, one of the smallest of Wren's churches, now demolished.

The Work of the Modern Indian Master Builder.

WE illustrate two examples of the modern Indian master builder, reproduced from "Indian Architecture," by Mr. E. B. Havell, by permission of Messrs. John Murray. We allude to them in our leading article.

Indian Official Architecture.

THESE four illustrations of buildings recently erected by the Public Works Department are taken from the annual Report of Architectural Work in India for 1914–15. We allude to them in our leading article.

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MEETINGS.

FRIDAY, MARCH 17.

Institution of Mechanical Engineers.—General meeting. 8 p.m.

MONDAY, MARCH 20.

University Extension Lecture (*at the Victoria and Albert Museum*).—Mr. Banister Fletcher on "Georgian Town and Country Houses." 4.30 p.m.

TUESDAY, MARCH 21.

Institution of Civil Engineers.—Sir George Cunningham Buchanan, C.I.E., M.Inst.C.E., on "The Rangoon River—Training Works." 5.30 p.m.

WEDNESDAY, MARCH 22.

Carpenters' Company.—Mr. H. Hughes-Stanton on "Landscape Painting." 7.45 p.m.

Royal Society of Arts.—Rev. P. H. Ditchfield, M.A., F.S.A., on "The England of Shakespeare." 4.30 p.m.

THURSDAY, MARCH 23.

University Extension Lecture (*at the British Museum*).—Mr. Banister Fletcher on "S. Sophia, Constantinople." 4.30 p.m.

FIFTY YEARS AGO.

Sanitary Matters.

Sunderland.—The Sanitary Committee c the Corporation, dissatisfied with the Repo of the guardians' medical deputation, as t the prevalence of fever in the parish, hav themselves appointed another deputation c medical men, as well as a Committee, t examine fully, and report upon the causes.

Gateshead.—Typhus still lingers in Gate head, not merely confining itself to th houses of the poorer classes, but sometim making its appearance in the houses of th more wealthy of the population. A corre spondent of the *Gateshead Observer* stat that he heard numerous complaints again the Corporation for not emptying ashpits an middens when requested.

Manchester.—Fever is on the increa here, the weekly number of new cas having risen from 122 to 135, of whic fifteen terminated fatally.

[*** From the *Builder* of March 1 1866.—ED.]

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CORRESPONDENCE.

Employment of Discharged Sailors and Soldier

SIR,—In view of the urgent nation importance of the employment of the discharg sailor and soldier, may I ask you to dra special attention to the meeting to consid their settlement upon the land ?

This Association has prepared a speci Report on the Departmental Committe Report on the subject, and this will be d cussed at the meeting at the Mansion Hou on March 22 at 3 p.m., the Lord Mayor presidin Lord Selborne, the President of the Board Agriculture, will speak, and most of the societi interested, both in the welfare of sailors a soldiers and in the development of ru England, will be represented.

I shall be pleased to send cards of invitati to any of your readers applying for them.

EWART G. CULPIN,
Secretary.
The Garden Cities
and Town Planning Association,
3, *Gray's Inn-place,*
Gray's Inn, London, W.C

◆

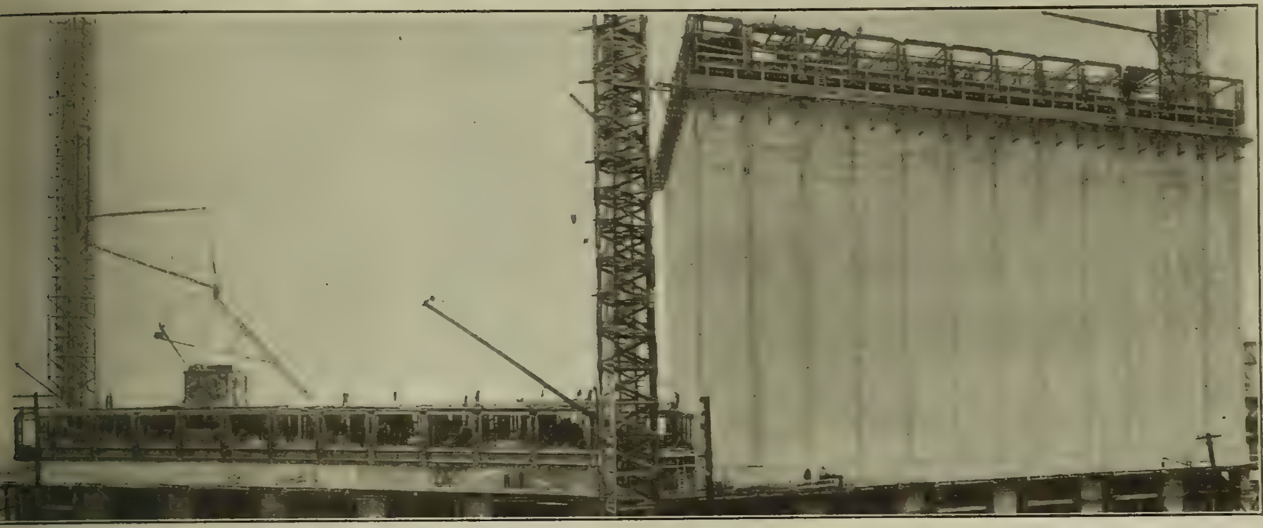
PRIMITIVE METHODIST CHURCH AND SCHOO SALISBURY.

The foundation-stones of the church w laid on March 8. The church will accommoda over 400 persons, and is of late Gothic desi freely treated. Externally the buildings a faced with Southwater red facing bricks, t dressings being of Bath stone. The contract for the first section—church, tower, and spi and vestries—is let to Mr. J. Nichol, Southampton, and the amount is £3,4 exclusive of seating, and the buildings a being carried out from the designs and unc the superintendence of Messrs. George Baines Son, architects, 5, Clement's Inn, Stra London, W.C., and Leeds.

TECHNICAL COLLEGE, CARDIFF.

The new Technical College in Cathays Pa Cardiff, has just been opened. The total c of the College will be nearly £62,000 when is fully complete. The building is in the fo of three sides of a square, the fourth bei reserved for future extension when necessa Two rows of workshops, top-lighted, ha been erected in the area between the north a south wings and parallel to them, while t assembly and examination hall, which centrally situated and has a seating capaci of 400, connect them. Large workshop acco modation has been set apart for the buildi and engineering trades. Altogether fifty lectu rooms, workshops, and laboratories have be provided. The architects are Messrs. I Jones & Percy Thomas, Mr. J. E. Turner, Messrs. E. Turner & Sons, the contractor.

CONSTRUCTION SECTION.



Harbour Elevator, Montreal, Quebec, showing forms in first and final positions.

INFORCED CONCRETE GRAIN ELEVATORS FOR AUSTRALIA.

STRALIA has for many years considered
the possibility of handling its grain
from the farmer to the seaboard
at is known as the Bulk System. It
nated that by this system the farmer
ve from £250,000 to £300,000 per
upon his sacks alone. The South
ian Royal Commission on the question
Marketing of Wheat, in their Progress
dated 1908, and their final Report,
909, dealt exhaustively with the question
dling the grain in bulk, which would
ate the erection of a number of grain
s under Government control.

Government of New South Wales has
cided to proceed with a scheme, which
or an expenditure of £2,000,000, and
ave entrusted the designing of these
rs to the John S. Metcalf Company, Ltd.,
ll also, by the terms of their agreement,
superintending engineers. The prepara-
plans and specifications is already in
s, and the actual building is expected
t about July this year. The scheme
only to New South Wales, but it is
d that similar schemes will be carried
South Australia, Victoria, and Western
ia.

South Australian Government, before
a contract for the actual designing
n elevators, decided to have a report
on the possibilities of handling the
y the Bulk System, and engaged the
Company to draw up this Report. The
as started early in 1915, and completed
January, 1916, when it was submitted to
vernment.

Report calls for :—

-four Country Elevators, capacity 40,000
, at £3,205 each.
y-four Country Elevators, capacity
bushels, at £3,720 each.
ty-two Country Elevators, capacity
bushels, at £4,105 each.
Terminal Elevators :—
rt Lincoln, 420,000 bushels, at £108,320.
rt Pirie, 620,000 bushels, at £121,580.
allaroo, 620,000 bushels, at £143,460.
uter Harbour, 820,000 bushels, at
5.

cost of the elevators will be decided by
; the costs given are the approximations
ed in the Report. The elevators will be
cted in reinforced concrete.

The same company, we may add, designed, in 1915, the grain elevator now in course of construction for the Armour Grain Company of Chicago, and the accompanying illustrations will give an idea of a modern grain elevator with a capacity of 10,000,000 bushels. It comprises a working house of one million bushels capacity, with facilities for receiving grain at the rate of 360 cars in ten hours, and shipping to cars at the same rate. At the same time, it will be arranged to dry 9,000 bushels of grain and bleach 24,000 bushels of oats in ten hours, besides large clipping and cleaning capacities. There will be a marine tower for receiving from vessels at the rate of 20,000 bushels per hour, and a river house equipped to ship to boats at the rate of 120,000 bushels of grain per hour, and with a shipping gallery to carry grain out along the wharf for trimming the vessels after they have received the bulk of their load at the river house. Between the working house and the river house there will be a storage house, which will bring the ultimate storage capacity of the plant to approximately 10,000,000 bushels.

All the machinery will be electrically driven, deriving power from a complete independent power plant of 4,700 h.p. Water tube boilers and turbo generators will be used. Complete facilities will be provided for collecting the dust caused by the handling and cleaning of the grain, and for sacking this dust or handling in bulk. An independent office building for convenience of the operators, a welfare building for employees, a shop building, and 1,200 ft. of wharf are also included in the work.

An interesting feature from a construction point of view is the moving forms used in the erection of bin walls in Canada and the U.S., although practically unknown in this country. These moving forms have many advantages over the usual forms of shuttering in concrete work. The success attained in the construction of the harbour elevator No. 1 for the Harbour Commissioners of Montreal will illustrate the speed of erection which can be obtained by this method. The storage bin walls were each 81 ft. to 96 ft. high, or 7,536 yds. of concrete, and took only the equivalent of 232,000 sq. ft. of timber, 1 in. thick, including the scaffolding.

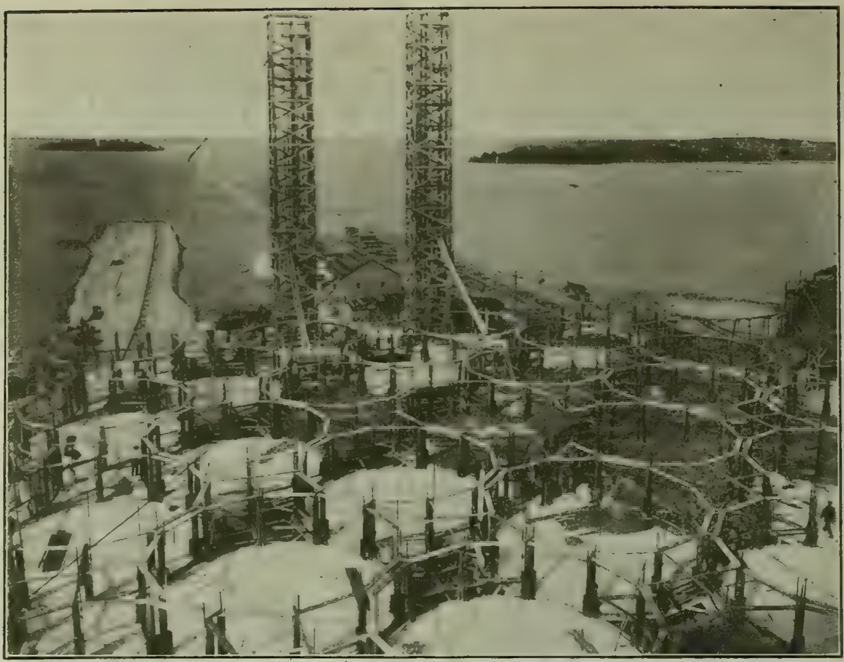
The pouring of the concrete was started on September 3, and on September 10 the walls were 42 ft. 6 in. high, a total of 2,946 yds. of concrete having been placed in these walls in seven days. A further advantage to be claimed for the moving forms is in the finish of the walls; both sides are quite smooth, and the usual unsightly timber marks on shuttered concrete are eliminated. The total wall, 96 ft. 7 in. high, was completed in seventeen days, with an average of 5 ft. 8½ in. per day—this being considered only ordinary progress.

The forms are built of wood, and are like parallel fences 4 ft. high, held apart by yokes to give the thickness of wall required. These 4-ft. fence forms are made and erected for the whole area occupied by the bin walls before any concrete is poured, and the separate form units are yoked and fastened to act as one unit, sometimes as much as an acre in area. As concrete is poured in between the parallel fences the forms themselves are gradually and continuously raised. The space between the forms is covered over to give a level runway for the concrete buggies, so that from above the moving forms look like a big level platform with open slots left where the concrete for the walls is to be poured. Concrete buggies are wheeled about over this platform with as much safety as if they were on the ground.

Amongst the plants designed and in some cases erected by this firm recently are those for the Grand Trunk Railway and the Canadian Pacific Railway on the Georgian Bay, and that for the Port of Montreal are perhaps the most interesting. The company also designed and constructed the first Manchester Ship Canal Elevator, and the No. 2 elevator just completed at No. 9 Dock was also designed by them and erected under their supervision. They are engaged at the present time upon the designs for the silos and grain handling plant for Messrs. Guinness's new brewery at Trafford Park, Manchester.

EXTENSION OF ANCOATS HOSPITAL.

The extensions of the out-patient department of this hospital consist in the erection of two examination-rooms for surgical and medical cases, measuring respectively 20 ft. by 15 ft. and 18 ft. by 15 ft.; a pathological laboratory, and a room in which is installed the cardiographic apparatus recently presented to the institution. There is also a "dark-room." All these rooms are approached by means of a corridor leading from the patients' waiting hall. The five smaller examination-rooms have been remodelled, the roofs reconstructed, and lantern lights inserted. The architect is Mr. W. Cecil Hardisty, F.R.I.B.A., of Manchester.



Reinforced Concrete Grain Elevators: Canadian Pacific Railway Elevator, Port McNicoll, Ontario, showing moving bin forms in position. (*See page* 217.)

THE CONCRETE INSTITUTE.

AT a meeting of the Concrete Institute on the 16th ult. Mr. C. F. Marsh, M.Inst.C.E., Vice-President, read a paper on "Reinforced Concrete as Applied to Waterworks Construction," in the course of which he said:—

"In the construction of works specially required for the purpose of the conveyance and storage of water reinforced concrete can be usefully employed for many purposes. The chief uses for this material are the construction of dams for impounding water, of aqueducts and pipes for its conveyance, and reservoirs and tanks for its storage. There are also many works of an incidental nature for which reinforced concrete may be employed, amongst which are retaining walls, bridges, slope coverings, buildings, fencing, and sundry other structures of various descriptions essential for the completion of any large system of water supply. In this paper only the main uses of the material will be dealt with, as the incidental uses entail its general application to engineering works.

The concrete used for structures, which must resist the pressure of water, should be richer in cement than that used for the generality of structures. For reservoirs, tanks, and dams, where there is sufficient thickness, the concrete should be mixed in the proportions of 1 : 1½ to 3, or 810 lb. of cement to 13½ cubic ft. of sand and 27 cubic ft. of broken stone or shingle, which mixture is sufficiently watertight for any but very considerable heads, but for pipes and structures of small thickness, say, less than 3 in., a mortar mixed in the proportions of 1 to 1½, or 1,620 lb. of cement to 27 cubic ft. of sand, should be used. This mixture is, of course, no more resistant to water pressure than a 1 : 1½ to 3 concrete, but in a thin structure there is a danger in the use of stone or shingle, since two pieces may possibly come together, and any failure in the proper consolidation of the concrete may leave a plane of leakage through the concrete. The size of the broken stone or shingle should not exceed such as will pass through a ¾-in. square-meshed sieve, and may with advantage be ½-in. gauge. It is not advisable to use a richer mixture, as rich mixtures shrink more when drying and expand more when wet than leaner mixtures, and consequently cracks are more likely to be induced; while it has been proved conclusively that with proper care in mixing and placing a mixture in the proportions of 1 to 1½ to 3 is practically impervious under considerable heads. For pipes under pressures exceeding about 40 ft. special linings should be used, such as the sheet-steel tubing in a Bonna pipe or other suitable layer of impervious material.

For any structure which has to resist the percolation of liquids it is advisable, in my opinion, to mix some waterproofing compound with the concrete, or to otherwise provide against leakage by the use of a soap and alum wash, paraffin wax, or other protective coating.

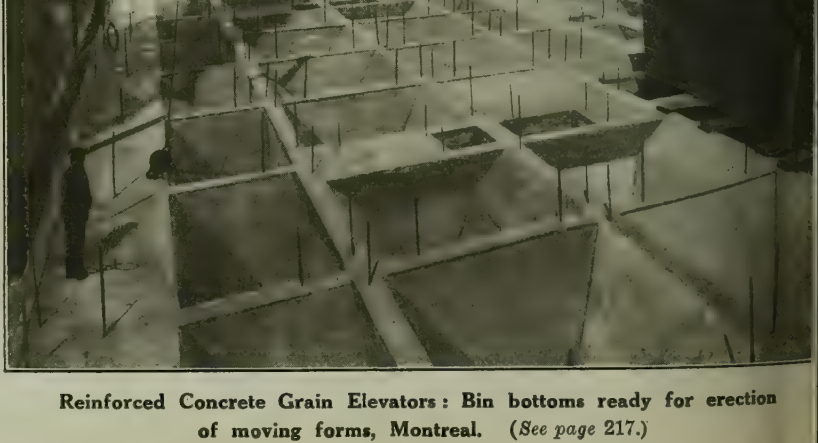
For increasing the imperviousness of concrete or mortar ordinary hydrated lime has been used very successfully and appears just as effective as any of the patent compounds on the market. It can be used in proportions up to 10 per cent. of the weight of cement without injuriously affecting the strength of the mixture, but 5 per cent. is sufficient for any ordinary purpose. The concrete should always be kept damp for some time after moulding, depending on the richness of the mixture. The period in the case of a 1 : 1½ : 3 mixture should be about four weeks.

In structures of considerable length, which may be alternately wet and dry and are exp
to the variations of temperature, it is advis
to provide against cracking, which is al
certain to occur. Such structure should
specially constructed contraction joints
more thant 30 ft. apart, leakage being preve
at the joints by the insertion of sheet lea
copper baffles extending well into the con
on each side of the joint and bent over at
extremities to form a good key. In the
struction of all structures to resist the pre
of liquids, special care is necessary to pro
adequate reinforcement against shrinkage
to the setting of the concrete, fall of tempera
and excessive dryness.

Dams for impounding water have not
constructed of reinforced concrete in
country to any extent up to the present
but there have been many cases in Am
where this material has been used for such d
When reinforced concrete is employed for
construction of dams they are usually of a h
form of construction, having up-stream
down-stream slabs, supported on cross
carried upon a foundation slab. From
foundation slab a core wall must be ca
down under the bottom of the up-stream
and extended well into a watertight stra
The provision of an adequate cut-off wa
most essential, as some of the dams alr
constructed of this material have failed o
to the neglect of this precaution. The
stream slab is generally constructed wi
flat slope not steeper than 1 to 1, since
flatter the slope the more uniform is the pre
on the base.

With a dam of this type, as the rese
fills, the line of resultant pressure on the
will at first become farther and farthe
stream from the centre of pressure on the
with the reservoir empty. When the rese
has filled for a certain proportion of its d
depending on the slope of the up-stream slab
line of resultant pressure on the base m
back towards the centre until under the lim
flood conditions it will generally be foun
be slightly on the down-stream side of
centre of pressure on the base with the rese
empty. The resultant pressure will in no
move very far from the centre of the base,
consequently the intensity of pressure
never vary greatly between the up-stream
down-stream extremities of the base.

Perhaps one of the most economical us
reinforced concrete is in the constructio
elevated tanks, of which there are n
examples in existence. With care and
in the design these structures may be
quite picturesque features of the lands
and are in any case less objectionable



Reinforced Concrete Grain Elevators: Bin bottoms ready for erection of moving forms, Montreal. (*See page* 217.)

ed steel tanks on framed supports. A rced concrete tank can be constructed eost of from 40 to 50 per cent. that of a formed of riveted steel plates, and they n general be less expensive than tanks ssed steel or cast-iron plates.

en designing circular reinforced concrete it is, in my opinion, advisable to limit orking resistance of the steel to 12,000 lb. quare inch, since, although the tensile nce of the concrete is neglected, the tion of the steel bars must induce elonga- the concrete, and a higher stress in the will in all probability cause the concrete ck. It is also, in my opinion, advisable rt two series of circular rings in the walls tank, one near each surface, in place of ries at the centre of the thickness. One as occurred to my knowledge, and there have been others, where the concrete e the central series of hoops broke away used the failure of the structure. It must membered that whereas the interior of nk is kept at a fairly constant state of re and temperature the outside is exposed variations in temperature and humidity, onsequently the two surfaces are under ifferent conditions affecting the expansion ntraction of the concrete.

the construction of reservoirs of this the question as to the economy or other- resulting from the use of reinforced te should receive careful consideration its employment is decided upon. The d of design, if this material is decided will also require careful consideration. ny cases it is not economical, in my n, to use reinforced concrete for the walls or, but it is almost universally an nical material for roof construction.

considerable portion of the depth is below the form of retaining wall construction, bottom slab at the back tied to the front y ribs, is not an economical form of uction, as the excavations have to be erably enlarged to accommodate the slab. A wall designed as a cantilever, ted from the floor of the reservoir, will the excavation, but great care is necessary vide ample support at the bottom to prevent failure between the base of the wall and the floor when the reservoir is empty.

If the reservoir is covered and the covering can be constructed before an excessive loading is brought upon the walls, the roof beams and similar beams formed in the floor can be constructed to support beams along the top and bottom of the wall; which in their turn support the ends of vertical beams between which the walls of the reservoir can be constructed as slabs with horizontal reinforcements.

The covering usually adopted for reservoirs is of the beam and slab type, similar to ordinary floors, and supported by columns, but small circular reservoirs may be covered with a flat dome in a similar manner to that frequently employed for elevated tanks.

Reinforced concrete is a suitable material for elevated aqueducts, a notable example being the aqueduct used to convey water from the Rhone to the Simplon Tunnel works, which was designed and constructed by M. Hennebique and is illustrated in "Reinforced Concrete" by Marsh and Dunn. This aqueduct was nearly two miles long with a fall of 1 in 830 It was of box section about 6 ft. 3 in. by 6 ft. 3 in., and the side walls were about 4 in. thick, the floor about 4 in. at the sides, increasing to about 6 in. at the centre, and the roof about 3½ in. at the sides and 4¾ in. at the centre. The aqueduct was supported on reinforced concrete columns varying from 13 ft. to 19½ ft. in height and placed about 16 ft. 6 in. centre to centre. Expansion joints were left over each support, with a sheet of flexible metal embedded near the outside. These joints were filled in after the first contraction of the concrete.

Open aqueducts built almost entirely above ground-level and those for carrying water over valleys may, with economy, be constructed of reinforced concrete, but for those constructed mainly below ground-level this material will not be so economical for the same reasons as given in the case of reservoirs.

Pipes under small heads, say, up to about 40 ft., may be constructed of reinforced concrete without any special impervious material being embedded in the thickness.

For heads over about 40 ft. some special impervious layer is, in my opinion, necessary. The well-known Bonna pipe is a good example of this type of construction. The impervious layer is formed by a thin sheet steel tube with longitudinal welds formed by the oxy-acetylene or electric processes. This tube is embedded in the thickness of the concrete with the reinforcement outside for smaller heads and inside and outside for greater heads."

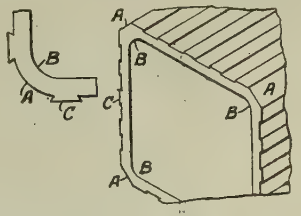
HOUSES IN NORTHUMBERLAND.

We illustrate three well-planned houses, designed by Mr. Edward Cratney, which show the increasing influence of axial planning applied to a type of work which has long been distinguished by the absence of symmetry. The house at Stocksfield for Mr. H. Dillon Bennett has been built; the building of the other houses is for the time in abeyance.

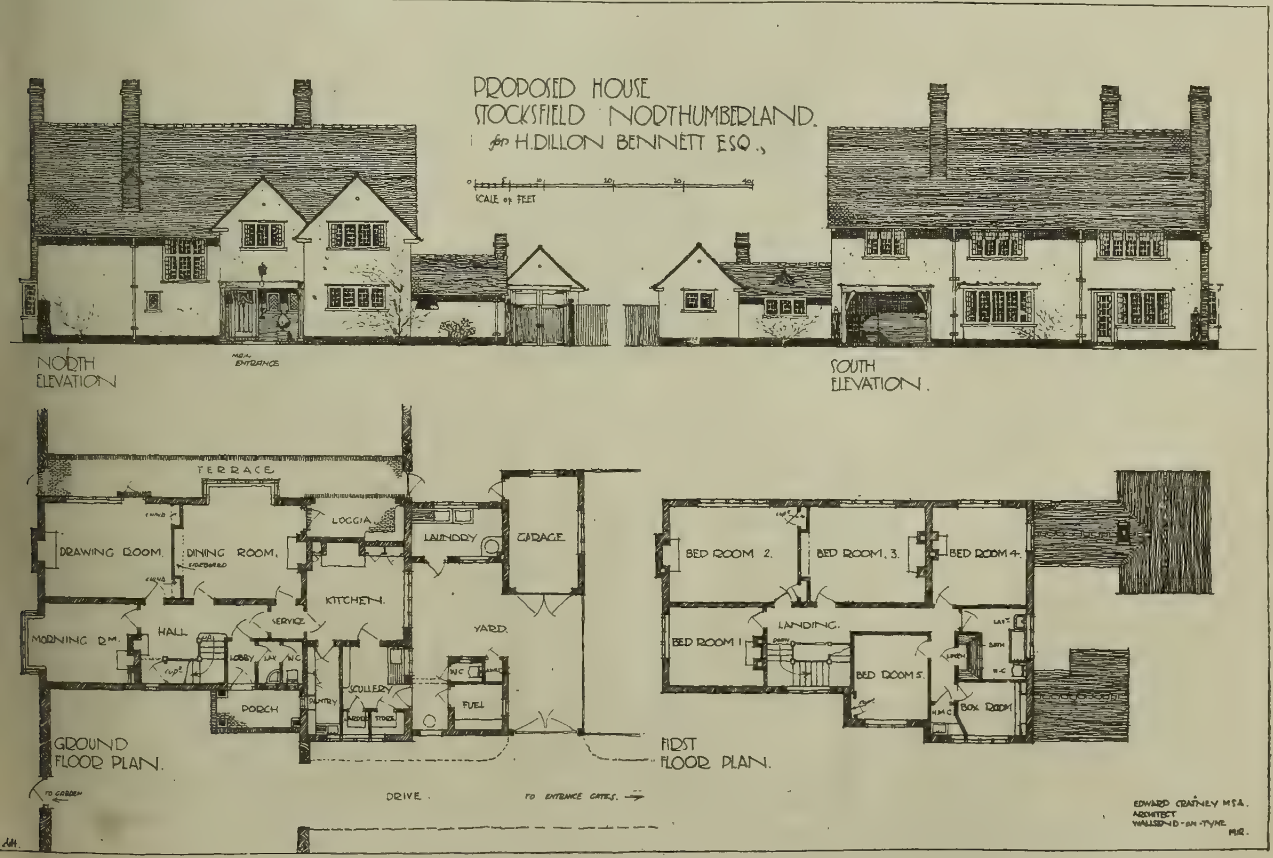
SELECTED PATENT.

☞ 20,745 of 1914.—George Leslie Allen: Blocks for floors.

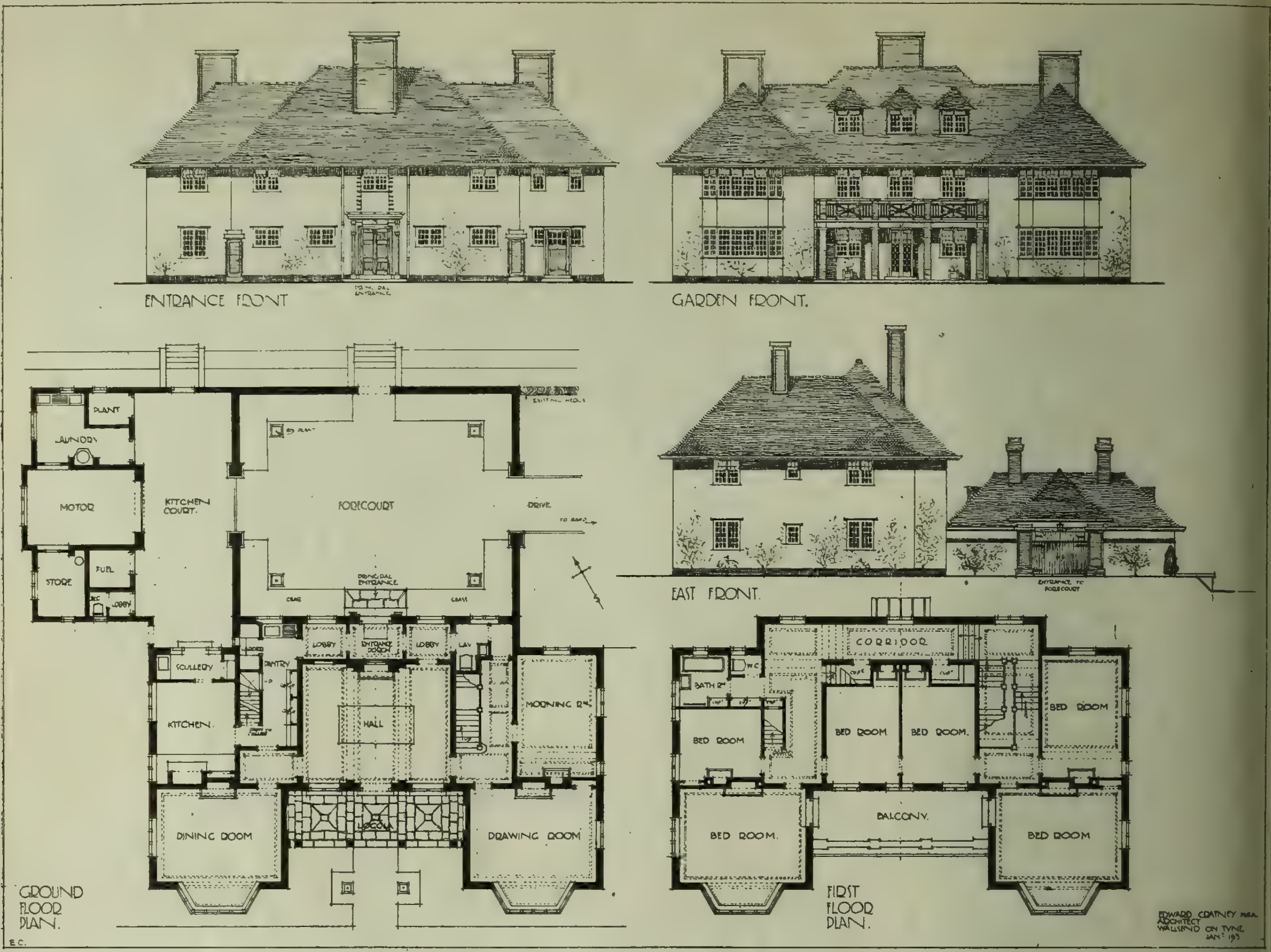
This relates to hollow filling blocks, for concrete and like floors, formed with bevelled corners A to provide an adequate bulk of material at the junctions of the vertical and horizontal layers of concrete and also to facilitate the attachment of electric or like fittings. The corners may be straight or rounded, and the interior corners B are curved. The external surfaces of the blocks are formed with longitudinal strips C with undercut edges.



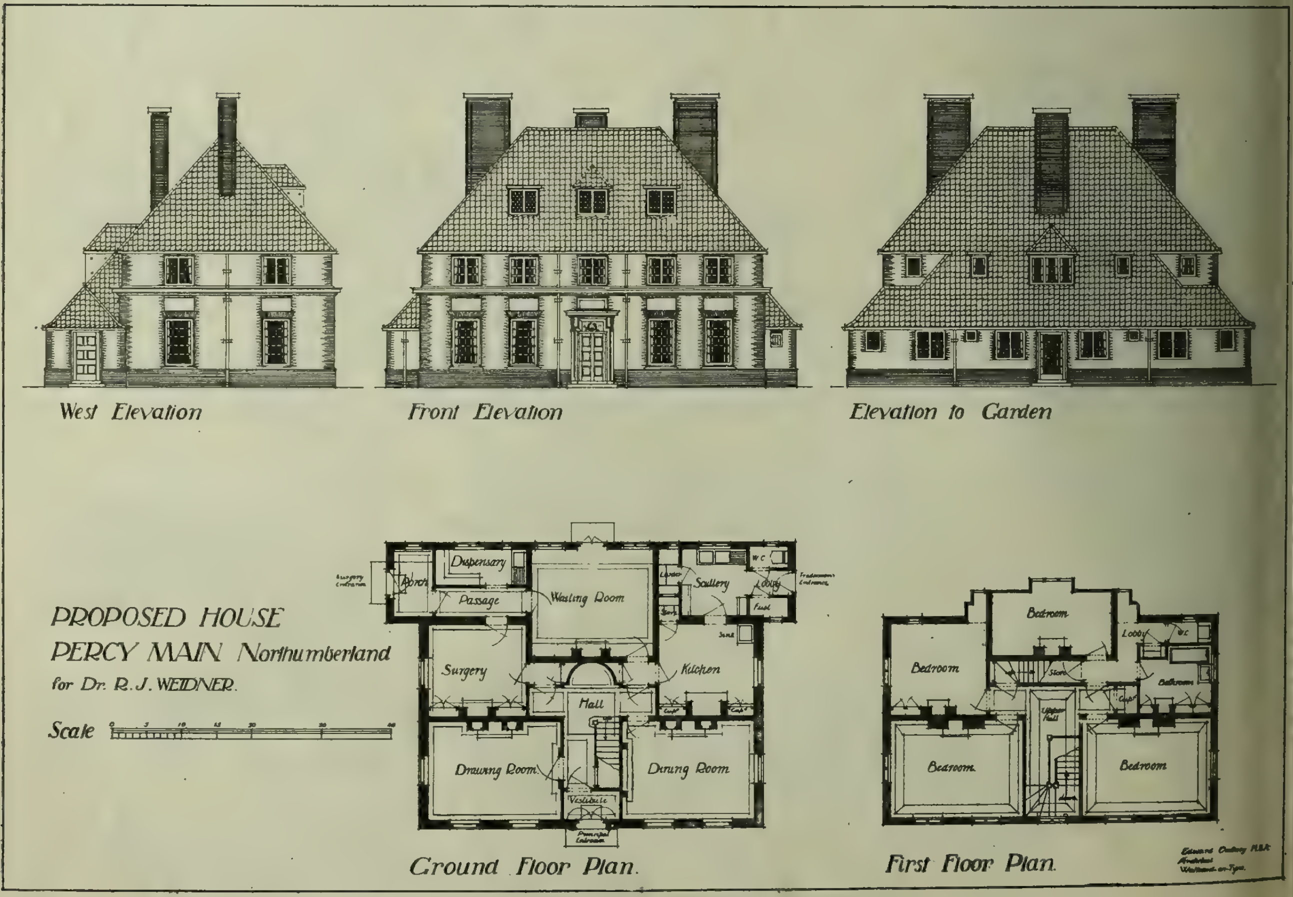
20,745 of 1914.



Mr. Edward Cratney, M.S.A., Architect.



Proposed House, Stocksfield, Northumberland.
Mr. Edward Cratney, M.S.A., Architect.



Mr. Edward Cratney, M.S.A., Architect. (*See page* 219.)

THE BUILDING TRADE.

LUMP SUM CONTRACTS.

T is satisfactory to have a decision of the Court of Appeal on a question which must be of everyday occurrence, but the law as hich has to be gleaned from a series of old . In the case of Dakin & Co., Ltd., *v.* Lee, ne Law Reports for March, but which reported some months ago in the *Builder*, the tiffs, builders, had undertaken to do certain rs to the defendant's house for a lump and they were suing for a balance of unt. The defendant's contention was that vork had not been completed, and therefore r the lump sum contract nothing was ble. Part of the plaintiff's claim related dditional work and extras, but it is not ssary to consider anything but the lump contract, as the appeal related only to aw in connection with that.

ne Official Referee had found that the work red to in the specification had not been ed out in three particulars:—(1) The rete to be placed under part of a side wall h was to be under-pinned was placed to a h of 2 ft. instead of 4 ft. It may here be d that the depth was not stated in the fication, but only in a letter, and the Court ppeal expressed some doubt as to whether was in fact an express contract as to but the case was treated on this basis; olumns to support a bay window were of w iron 5 in. in diameter instead of solid 4 in. in diameter; (3) the joints over the window had not been bolted together as fied, and the concrete was not properly ed.

may be said at once that the Court of eal considered these omissions to be due egligence and bad workmanship, probably g to the carelessness of some workman or foreman, and not a deliberate omission the specification. The Divisional Court carefully reviewed all the authorities, and Justice Sankey thus summarised the law:—here a builder has supplied work and labour the erection or repair of a house under a sum contract, but has departed from the s of the contract, he is entitled to recover his services unless (1) the work that he has has been of no benefit to the owner; the work he has done is entirely different the work which he has contracted to do; 3) he has abandoned the work and left it nished."

he Court of Appeal affirmed this decision ne Divisional Court, but apparently mainly essed itself to the point that there had been abandonment of the contract, and they ed the judgment in one particular; for reas the court below had arrived at the wance to be made to the building owner n informal manner, the Court of Appeal rred the case back to the Referee to ascertain t sum should be allowed in respect of the ctive work.

he principle to be applied was laid down Thornton *v.* Place (1 Moo. & R. 218), a case re work had not been done in accordance a specification, by Baron Parke as follows:—hen a party engages to do certain work on ain specified terms and in a specified ner, but in fact does not perform the work s to correspond with the specification, he is, course, not entitled to recover the price ed upon in the specification; nor can he ver according to the actual value of the k, as if there had been no special contract; at the plaintiff is entitled to recover is the e agreed upon in the specification subject deduction; and the measure of that deduc- is the sum which it would take to alter work so as to make it correspond with the ification."

he Court of Appeal referred the case back the Official Referee to be dealt with on the nciples laid down in this case. We do think it necessary to detail the cases which e reviewed by the courts, but we may point out that one case which is to be found in the text-books, Ellis *v.* Hamlen (3 Taunt. 52) was overruled as being inconsistent with the other cases and with the principles now laid down.

The reason for the adoption of some such principles in relation to building contracts is easy to explain, for where work has to be done on another man's property it is not like the case of a chattel which can be examined and rejected if it is not made as ordered, but by a gradual process becomes a part of the property and must be accepted in a sense by the owner of the property. Therefore in ordinary cases the first of the tests set out in this case covers the main point to be ascertained, viz., has the building owner derived benefit from the work done?

The second test, however, must qualify this, as the work must be of the nature of that contracted for, for a building owner might be said to derive benefit from work done to his house although it was not of the nature he had contemplated.

In the course of the argument the case was put of a builder who contracts to erect a wall 10 ft. high, but in fact only erected one 2 ft. high. The building owner might be said to derive some benefit in such a case, but Mr. Justice Sankey said that this would come under the third head mentioned, *i.e.*, an abandonment of the contract.

We think that the tests provided in the judgments in this case will be found to provide valuable guides to contractors and those contracting with them, and if careful consideration is given to them they will be found to apply to nearly every case likely to arise in practice.

NEW GOVERNMENT CONTRACTS.

War Office.

Barrows.—Baltic Saw Mills Company, Ltd., Goods Station-road, Tunbridge Wells; J. Christopher & Sons, Ltd., St. John's-lane, Clerkenwell, E.C.; C. R. Claridge, Steam Saw Mills, The Basin, Exeter; Colby Bros., Ltd., Oulton Broad, Lowestoft; Cravens, Ltd., Darnall, Sheffield; Cravens Patent, Ltd., 99, Corporation-street, Manchester; Davies & Pryer, Ltd., Collingdon-road, West Dock, Cardiff; F. Davis & Co., Ashford, Kent; Horsfall & Son, Canal Wharf, Luddendenfoot, Yorks; Hoskings Bros., Riverside, Newbury; Lunn Bros., Brockenhurst, Hants; Maldon Iron Works Company, Ltd., Maldon; Newport Ladder and Barrow Company, 4, Caerleon-road, Newport, Mon.; F. Parker & Co., 22, West End-lane, Kilburn; C. R. Pettit & Son, Bridge-street, Thrapston; W. J. Philpott, 131, Waddon New-road, West Croydon; H. C. Slingsby, Preston-street, Bradford; Stableford & Co., Ltd., Coalville, Leicester; J. C. Stephens & Son, 884, Old Kent-road, S.E.; R. Taylor, Church-road, Northwich, Cheshire; Webb, Major, & Co., Ltd., Weymouth-road, Dorchester.

Cable and Wire, Electric.—British Insulated and Helsby Cables, Ltd., Helsby, Warrington; I. Frankenburg & Sons, Ltd., Salford, Manchester; Hooper's Telegraph and India Rubber Works, Ltd., 31, Lombard-street, E.C.; Johnson, Matthey, & Co., Ltd., 78, Hatton-garden, E.C.; Johnson & Phillips, Ltd., Charlton, S.E.; Liverpool Electric Cable Company, Linacre-lane, Bootle, Liverpool; St. Helen's Cable and Rubber Company, Ltd., Warrington; Siemens Bros. & Co., Woolwich, S.E.

Cranes, Steam, and Accessories.—Dunlop, Bell, & Co., Ltd., 46, Greenland-street, Liverpool; J. Wardell & Co., Westminster-chambers, 3, Victoria-street, S.W.

Engines, Oil, and Parts.—Keighley Gas and Oil Engine Company, Ltd., Imperial Works, Keighley; Petters, Ltd., 73, Queen Victoria-street, E.C.

Glass, Sheet.—Pilkington Bros., Ltd., St. Helens.

Paint.—L. Berger & Sons, Ltd., Homerton, N.E.; Blyth, Heald, & Langdale, Ltd., Oak-road, Newland, Hull; J. S. Craig & Co., Ltd., 97, Portman-street, Glasgow; Indestructible Paint Company, Ltd., Norway Wharf, Commercial-road East, Limehouse, E.; Locke, Lancaster, and W. W. & R. Johnson & Sons, Ltd., 306, Burdett-road, E.; Rowe Bros. & Co., Ltd., Old Quay Lead Works, Runcorn; Rowe Bros., Ltd., City Lead Works, Liverpool; Whiffen & Sons, Ltd., Aldersgate Chemical Works, Southall.

Roofing, Asphalted.—R. W. Blackwell & Co., Ltd., Croydon, and 14, Gt. Smith-street, S.W.; Graves & Co., Ltd., Waterford.

Roofing, Rubber, etc.—Ruberoid Company, Ltd., Ruberoid Works, Brimsdown, Enfield Highway, N.; F. McNeill & Co., Kirkintilloch, Glasgow, etc.

Tanks.—J. Ash & Son, Rea-street South, Birmingham; F. Braby & Co., Ltd., Ashton Gate Works, Bristol, etc.; H. Braithwaite & Co., Ltd., Swinegate, Leeds; Bulpitt & Sons, Ltd., Swansea Works, Birmingham; Burt Bros., Edward-street-parade, Birmingham; J. Chew & Co., Brookhouse, Blackburn; Coventry Motor Fitting Company, Ltd., Far Gosford-street, Coventry; Farringdon Works and H. Pontifex & Sons, Ltd., King's-road, Hay Mills, Birmingham; Fisher & Ludlow, Ltd., Rea-street, Birmingham; F. Francis & Sons, Ltd., Trundley's-road, Deptford, S.E.; G. A. Harvey & Co. (London), Ltd., Woolwich-road, S.E.; W. Hepton & Son, Hunslet-lane, Leeds; Keep & Co., Barn-street, Birmingham; Llewellins & James, Ltd., Castle Green, Bristol; F. W. Lucas, Ltd., 240, Brixton-hill, S.W.; J. Lysaght, Ltd., Bristol; Mann & Spence, West-gate-road, Dartford; Manwood, Miller, & Co., Tame Valley, Dukinfield, Cheshire; Mathews & Timmings, Cambridge-street, Birmingham; Midland Tank & Ironplate Company, 243, Heneage-street, Birmingham; Musgrove & Green, Ltd., 46, Bromsgrove-street, Birmingham; Orme, Evans, & Co., Ltd., Wolverhampton; Parkinson and W. & B. Cowan, Ltd., Fitzalan-street Works, Kennington-road, S.E., and Bell Barn-road Works, Birmingham; G. W. Pearce & Sons, Ltd., Chester-street, Birmingham; T. Piggott & Co., Ltd., Atlas Works, Spring-hill, Birmingham; C. Raine, Cleveland-street, Hull; W. Soutter & Sons, Ltd., Farm-street, Birmingham; J. Truman & Co., Ltd., Smithfield-passage, Birmingham; Walls, Ltd., Fazeley-street, Birmingham.

Tools.—Alldays & Onions Pneumatic Engineering Company, Ltd., Birmingham; Bache Bros., Ltd., Stakenbridge, Churchill, Kidderminster; Bell Bros. & Co., Solferino-street, Sheffield; J. Berry, Heath-road, Ditton, Widnes; W. G. Birkinshaw & Co., Reliance Works, Wolverhampton; B. Bladen & Son, Halesowen, Birmingham; T. E. Bladon & Son, 99/105, Northwood-street, Birmingham; J. Blundell & Sons, Ltd., Houghton-street, Prescot, Lancs; S. Briggs & Co., Ltd., Burton-on-Trent; F. J. Brindley & Sons, River-lane, Sheffield; J. Brooks (Lye), Ltd., Brook-street, Lye, Stourbridge; J. Brown, Imperial Works, Halesowen; Burys & Co., Regent & Philadelphia Works, Penistone-road, Sheffield; Chater Lea, Ltd., 74/84, Banner-street, E.C.; C. Churchill & Co., Ltd., 9/15, Leonard-street, Finsbury, E.C.; Douglass Bros., Ltd., Globe Iron Works, Blaydon-on-Tyne; E. Elwell, Ltd., Wednesbury; B. Fiddian & Son, Albion Works, Stourbridge; W. Gilpin, Sen., & Co., Ltd., Churchbridge, Cannock, Staffs; Grimshaw, Baxter, & J. J. Elliott, Ltd., 29/37, Goswell-road, E.C.; Hardy Patent Pick Company, Ltd., Sheffield; J. Hatton, Washing Pool, Stourbridge; H. L. Hawtin, Wisemore, Walsall; F. Herring & Sons, 22½, Cazenove-road, Stoke Newington, N.; W. Hunt & Sons (The Brades), Ltd., Brades Steel Works, near Birmingham; J. Keeves & Sons, Ltd., Boundary-street, Shoreditch, N.E.; Kitson-Empire Lighting Company, Ltd., Albert-road, Stamford; Lawson & Heaton, Ltd., 315, Long-lane, Nechells, Birmingham; Leedham & Heaton, Ltd., Armley-road, Leeds; E. & W. Lucas, Ltd., Dronfield Forge and Shovel Works, Sheffield; Marples & Sons, Ltd., Hibernia Works, Sheffield; A. Mathieson & Sons, Ltd., East Campbell-street, Glasgow; M. Mellor & Sons, Ltd., Lee Works, Arkwright-street, Nottingham; Moore & Wright, Hector Works, Sheffield; J. E. Morrison, 32, Bannon-street, Sheffield; I. Nash & Sons, Ltd., Wollaston Mills, Stourbridge; Patent Stone Dressing Tool Company, Ltd., Wicker-lane, Sheffield; Peacock Bros., 318, Sheffield-road, Tinsley, Sheffield; J. Perks & Sons, Ltd., Monmore Green Works, Wolverhampton; J. Petty

& Sons, 60, Garden-street, Sheffield; J. Potts & Son, Old-hill, Staffs; T. Rowlands & Co., Ltd., North Church-street, Sheffield; J. Shaw & Sons (Wolverhampton), Ltd., Wolverhampton; Sheffield Scissor and Razor Company, Ltd., Clough-road, Sheffield; C. T. Skelton & Co., Ltd., Sheafbank Works, Heeley, Sheffield; Spear & Jackson, Ltd., Aetna Works, Savile-street East, Sheffield; Steel Nut and J. Hampton, Ltd., Wednesbury; Stockton Heath Forge, Warrington; Swindell & Co., Ltd., Withymoor Works, Netherton, Dudley; Thewlis, Griffith, & Edelstein, Ltd., Warrington; C. Thomas & Co., Ltd., Aston Manor, Birmingham; L. Thomas & Co., Coaley, Dursley, Glos.; R. Thomas (Birmingham, 1908), Ltd., Icknield-square, Birmingham; G. Thornton & Co., Ltd., Phœnix Works, Tividale, Tipton; T. Turner & Co., Suffolk Works, Sheffield; J. Tyzack & Son, Ltd., Valley-road, Heeley, Sheffield; S. Vaughan, Ltd., Henry-street, West Bromwich; Ward & Payne, Limbrick Works, Hillsborough; Wardsend Steel Company, Sheffield; Whitecross Bros., Ltd., District Works, Cannock; C. Whitehouse & Sons, Ltd., Cannock; W. Wilkinson & Sons, Warrington-road, Penketh, Warrington; Wilson & Frith, 35, Eldon-street, Sheffield; G. Wolfe & Sons, Ltd., Bathgate; Yardley & Co. (Stourbridge), Ltd., Stamber Mills, Stourbridge; J. Yates & Co., Ltd., Exchange Works, Rocky-lane, Aston, Birmingham.

Erection of—Shed at Lincoln: W. Wright & Son (Lincoln), Ltd., Park-street, Lincoln; huts at Crowborough: W. F. Blay, Ltd., Railway House, Cannon-street, E.C.; huts for A.P. Dept. at Woolwich: W. F. Blay, Ltd., Spital-street, Dartford; messing centre at Ashford: H. Knock, New-street, Ashford, Kent; new boiler-house and chimney-shaft at Government laundry, Dublin: Collen Bros., Ltd., East Wall, Dublin; power-house, etc., at Lilbourne: Girdlestone & Co., 13, Davis-street, W.; shelters, etc., for A.P.C. offices at Hounslow: L. Kazak, Railway-place, Belvedere; shelters, etc., at Joyce Green: L. Kazak, Railway-place, Belvedere; shelters, etc., at Potter Heigham: Carter & Wright, Dene-side, Great Yarmouth; institute, etc., at Chatham: Barden & Head, 12, Union-street, Maidstone; steel storage bins at South Farnborough: Estler Bros., South Molton-road, Victoria Docks, E.; buildings at Beverley: T. Obank & Sons, Cyprus Works, Thackley, Bradford; buildings at Cramlington: J. Gerrard & Sons, Ltd., Swinton, Manchester; buildings at Dover: Hampton & Sons, Ltd., 8 and 9, Pall Mall East, S.W.; buildings at Joyce Green: Hampton & Sons, Ltd., 8 and 9, Pall Mall East, S.W.; buildings at Lilbourne: Wm. Moss & Sons, Ltd., Queen's-road, Loughborough; buildings at Rendcomb: W. E. Chivers & Sons, Estcourt-street, Devizes; buildings at Wye: Wm. Harbrow, Ltd., South Bermondsey Station, S.E.; ventilation to men's shelters at Seaford Camp: Peerless, Dennis, & Co., 56, Grove-road, Eastbourne.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The Plans Committee of the Aberdeen T.C. has passed the following plans:—Temporary shed, Justice Mill-lane, for the Town and County Motor Garage, per Mr. John Ellis, architect, Stonehaven; alterations on dwelling-house in East North-street, for Mr. R. A. Pressly, dentist, per Messrs. D. and J. R. M'Millan; alterations at factory at junction of North Esplanade West and Russell-road, for Messrs. George Mellis & Son, Ltd., per Mr. George B. Mitchell, architect; dwelling-house, Garthdee-road, for Messrs. Richards, Ltd., per Messrs. Wilson & Walker, architects; shed at Esplanade Saw Mills, North Esplanade West, for Messrs. John Bisset & Sons, Ltd., per Messrs. D. & J. R. M'Millan, architects; office and store, Commercial-road, for the Don Fishing Company, Ltd., per Mr. John Cameron, architect. The Street and Roads Committee of the T.C. has had before it a letter from Messrs. Wilson & Walker, architects, transmitting amended plans of the new warehouse proposed to be erected by Messrs. Richards, Ltd., in Kingsland-place.

Aldershot.—The D.C. has received plans for proposed buildings on a site acquired in the Avenue by the Army and Navy Stores.

Allendale.—The P.C. has approved plans of proposed semi-detached houses and shop to be built on the Allen View Estate.

Barcelona.—The *Gaceta* of February 27 notifies that tenders will be received by the Municipality of Barcelona, within a period of thirty days from that date, for the carrying out of street drainage and sewerage works in that city. The total estimated cost of the works is 131,651 pesetas (about £5,270).

Barrow.—The T.C. has agreed to a proposal of the General Purposes Committee to erect a number of houses for Corporation employees.

Belfast.—The Belfast Harbour Commissioners have accepted the tender of Messrs. H. & J. Martin, Ltd., for the erection of the proposed new shed at the Dufferin Dock.

Birmingham.—The Birmingham Tame and Rea District Drainage Board are making application to the L.G.B. for sanction to a loan of £1,200 for the extension of the Board's electric transmission installation at the sewage farm.

Bournemouth.—The L.G.B. has approved plans of the new pavilion to be erected at Bournemouth by the T.C. The scheme, estimated to cost over £50,000, will not be proceeded with until after the war.

Broadstairs and St. Peters.—The D.C. has approved plans of alterations to the Railway Hotel Stables, for Messrs. Tomson & Wotton.

Burnley.—The Improvement Committee of the T.C. has had before it a plan submitted by Messrs. John Knape & Son, Ltd., for the erection of a garage in Canning-street.

Buxton.—The U.D.C. has approved the following plans:—Addition at rear of Park Lodge; garage for Mrs. C. Swain, "Avenham," College-road; alterations at the Grove Hotel for Messrs. Allsopps, Ltd.

Chile.—Messrs. Gibbs & Co. have been granted permission to construct a wharf at the port of Mejillones for the loading and unloading of nitrate and coal. The *Diario* of December 22 last publishes a law authorising the Chilean Government to contract loans with banks in Santiago up to the amount of 1,500,000 pesos (about £51,500) for the execution of street paving works in that city.

Croydon.—Plans passed by the B.C.:—Mr. W. Darnell, 63, Fernside-road, Balham, fifteen houses, Headcorn-road; Messrs. Paish, Tyler, & Crump, 1, Addiscombe-road, four houses, Addiscombe-road; Mr H. G. Lumsden, 39, Crowther-road, five houses, Alfred-road.

Dewsbury.—The Electricity and Tramways Committee of the T.C. has accepted a contract for the erection of an engine-room. The National Electric Construction Company are to reinstate the buildings in the Market-place which were wrecked by a runaway tramcar some time ago.

Dundee.—Plans passed by the T.C.:—Brook-street, Broughty Ferry, alterations on dwelling-house for Mr. Robert Baxter; Byron-street, stables and temporary store for Messrs. Francis Stevenson & Sons; Meadow-street, alterations on and additions to offices for Messrs. Samson & Unna; South Baffin-street, store for Messrs. A. G. Kidd & Son, Ltd.; new streets, Maule-street and Navarre-street, Barnhill, extension of for the Earl of Dalhousie.

Dunfermline.—The Dunfermline Dean of Guild Court has passed plans by the Scottish National Council of the Y.M.C.A. for the extension of the Rosyth Hut. The extension is to consist of dressing and bathroom accommodation, hairdressing saloon, and lavatory provision.

Elgin.—Plans passed by the T.C.:—Motor garage proposed to be erected by Mr. Donald Mustard in Duff-avenue, and alterations of shop front proposed to be carried out by Miss Hay at 21, South-street.

Fylde.—Plans passed by the R.D.C.:—Mr. Popplestone, two houses, St. Anne's-road, Marton; Mr. W. Rigby, house and farm buildings at Higher-road, Freckleton; Fylde Industrial Cooperative Society, boiler house, Weeton-road, Wes am, Mr. John Kirkham; stable and piggeries, Bryning-lane, Wrea Green, Mr. A. Jackson; stable and piggeries, Preston Old-road, Marton.

Glasgow.—The Savoy Theatre, Glasgow, recently bought up by the Bicolor Syndicate, of London, is to be remodelled and made into a picture house. At a meeting of the Glasgow School Board it was moved that immediate steps be taken to provide classes for children of school age having defective sight and myopia, the school to be as centrally situated as possible. It was agreed to remit the motion to the joint consideration of the Special Schools and Medical Inspection Committees. The Shipowners' and Dock Labour Employers' Organisation has agreed to provide a dry canteen at Prince's Dock and one at Rothesay Dock.

Grantham.—The T.C. has approved plans of new workshop at Earlesfield Works, for Messrs. A. & J. Shaw, and additions to Nos. 29, 30, and 31, Manners-street, for Mr. T. M. Lawson.

Hammersmith.—The B.G. have been considering the question of structural alterations at the Infirmary.

Hartlepool.—The T.C. has approved the following plans:—Mr. J. T. Graham, rebuilding house, Victoria-place; Mr. R. Hopper, conversion of Ocean House, Moor-terrace, into two dwelling-houses.

Haywood.—The T.C. has passed the following plan:—Messrs. Wm. Wild, Ltd., new
Millers' Brook, Miller-street.

Lucan.—A fund is being raised to carry
extensions and repairs to the convent premi

Marsden.—The D.C. has passed plans
alterations at the Marsden Picture Palace.

Nelson.—The T.C. has approved the follo
plans:—For the Bridge Mill Company,
heald and reed store, Bridge Mill; for Mr
Aspin, bedroom, storeroom, etc., 7, Hendon-r

Newhaven.—At a recent meeting of the R.
the Surveyor submitted plans for the erectic
an estate office at New Anzac-on-Sea, and t
were passed. An estimate was received from
Petitt, of Rottingdean, of £18, for demolis
and clearing away Cliffe House, Rottingd
This was accepted.

Otley.—The L.G.B. held an inquiry into
town-planning scheme of the Otley Dis
Council.

Ramsgate.—The T.C. has approved plans
the erection of a bungalow in Pysons-r
owner, Mr. G. Griggs; and for the erectio
a private garage at Mr. Bryant's, in Shaftesb
street.

Rowley Regis.—It is proposed to convert
premises lately occupied by the Cable A
sories Company, Ltd., at Britannia-street,
dale, into a glue factory.

Selby.—The R.D.C. has appointed a com
tee to consider a town-planning scheme.

Spain.—A new road will shortly be constru
crossing the Sierra Nevada at an altitud
nearly 10,000 ft., and descending into the A
jarras district. The Government has gra
2,000,000 pesetas (about £80,000) for this ur
taking.

Stevenage.—Plans passed by the U.D.C
Plans submitted by Messrs. Shrouder
Matthews of proposed extension of drainag
29, Trinity-road, belonging to the Misses B
proposed additional room at Sishes for
Julius Bertram; plan submitted by Messrs.
Austin & Sons of proposed alterations at
Coach and Horses public-house, belongin
Messrs. E. K. & H. Fordham, Ltd.

Stokesley.—The R.D.C. has approved plans
the conversion of the old Bethel Chape
Stokesley into a farmhouse, and for a stone w
house at Great Ayton for Messrs. Dixon Br

Strood.—The Rochester T.C. has decided
purchase land at Steele-street, Strood, for
erection of workmen's dwellings to take the
of those recently demolished in other parts o
city.

Stroud.—The U.D.C. has approved a
presented by Mr. A. W. England for a c
gated-iron building at the back of his pren
in Lower-street.

West Lancashire.—The West Lancashire C
cil has approved the following plans:—Prop
wash-house, Titmouse Brow, Hesketh Bank,
Mr. T. Butcher; proposed extension of pren
in Coal Pit-lane, Bickerstaffe.

Wigan.—The T.C. has resolved to appr
the L.G.B. with a view to their sanction b
obtained to the immediate erection of par
the houses contained in the Melverley-s
scheme, and that the Town Clerk be autho
to make application for a grant towards
cost of erecting the houses in Melverley-s
and Coop-street.

Wokingham.—The T.C. has received plans
enlargement of the building belonging to
A. J. Priest at the corner of Langborough-
and Luckley-path.

GENERAL BUILDING NEW

MORLEY-ROAD UNITED METHODIST CHU AND SCHOOLS, DONCASTER.

The opening ceremony of this new ch
took place on the 2nd inst. Externally
building is faced with red bricks with
stone dressings. The seating, etc., is of
and accommodation is provided for about
persons, with provision for a future end gall
The school section is deferred for the pres
The contract, for £3,715, has been carried
by Messrs. Pattinson & Son, of Rusking
near Sleaford, from the designs and under
supervision of Messrs. George Baines &
architects, 5, Clement's Inn, Strand, Lon
and Leeds.

TRADE NEWS.

The Bedford Union Infirmary is b
supplied with Shorland's double-fronted w
air ventilating patent Manchester hosp
stoves by Messrs. E. H. Shorland & Brot
Ltd., of Failsworth, Manchester.

The "Boyle" system of ventilation (natu
embracing Boyle's latest patent "air-pun
ventilators and air inlets, has been app
to the General Office and Card Departmen
the London General Omnibus Company, L
Walthamstow.

We are informed that Messrs. Pither & S
new premises, 34, 36, and 38, Mortimer-st
have been built in glazed terra-cotta wit
turquoise-blue enamelled brick backgrou
The premises are expected to be fully compl
in two months.

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* See also our list of Competitions, Contracts, etc., on page 224.

NEW COMPANIES.

undermentioned particulars of new nies recently registered are taken from aily Register compiled by Messrs. Jordan s, Ltd., Company Registration Agents, ery-lane, W.C. :—

TT, KIRK, & CO., LTD. (143,081), Mont- y Works, Rockingham-street, Sheffield. ered February 21. To carry on business eral, electrical, and mechanical engineers, nists, hammer and tool manufacturers, nders, steel and munition makers, light, and heat producers, builders' haulage moval contractors, dealers in bricks, tiles, gas engineers, etc. Nominal capital, in 1,000 £1 shares.

LIAM SHEPHERD & SONS, LTD. (143,085), ne, Rochdale. Registered February 21. quire, take over, and carry on business ads and public works contractors, ters, and concreters, wood and stone, am, and tar paviors, tilers, road and ent makers, drainage contractors, lime one merchants and landscape gardeners, and building materials of all kinds, sters and founders, engineers, electricians, owners, wharfingers, etc. Nominal, £5,000 in 1,000 £5 shares.

ILL, LTD. (143,103), 2A, Christchurch-, Brondesbury, N.W. Registered ry 24. To carry on business of builders ntractors, decorators, merchants, dealers l, lime, stone, bricks, timber, hardware, her builders' requisites, brick, tile, and otta makers, house and estate agents, vater, and electrical engineers, etc. al capital, £1,000 in 1,000 £1 shares.

ISH PUMICE, LTD. (143,117). Regis- February 25. To carry on business of acturers of artificial pumice, chemical nware, silica, flint, stone, and glaze s, crate and case manufacturers, cement, brick, tile, and pipe workers, joinery acturers, kiln proprietors and quarry, dealers in hardware, etc. Nominal, £2,500 in 2,450 £1 "A" shares and s. "B" shares.

ANNERS & SONS, LTD. (143,125). Regis- February 25. To acquire, take over, arry on business of joiner, builder, merchant, builders' merchants, and contractors now carried on by T. s, at Bishop Auckland, dealers in slates, ime, cement, and builders' materials of ds for the execution of buildings, etc. l capital, £3,000 in 3,000 £1 shares.

E'S TRANSPORTS, LTD. (143,134). red February 26. To acquire, take nd carry on business of cartage con- now carried on as Joseph Moore, at and elsewhere, forwarding, railway, ipping agents, carriers, freight con- , lightermen, wharfingers, colliery and owners, builders, timber merchants, etc. l capital, £2,870 in 2,870 £1 Ordinary

HTS' (COLCHESTER), LTD. (143,146). red February 28. To acquire, take over, rry on business of coal and general , merchants, and cartage contractors rried on at Hythe Quay, Colchester, and e, as Frank Wright, carriers by road, ., haulage contractors, dealers in sand, pes, pottery, etc., and manufacturers of Nominal capital, £5,000 in 5,000 £1

Y SCHUMAN, LTD. (143,159), 41, stone-street, E.C. Registered March 1. y on business as furniture merchants ors, cabinet makers, timber merchants, contractors, engineers, exporters, rs of furniture, timber and other com- s, carriers, warehousemen, etc. Nominal £500 in 500 £1 shares.

LBAN RICHARDS & CO., LTD. (143,165). ed March 1. To build, construct, control in the United Kingdom and e public and private works, buildings, veniences of all kinds and carry on of builders and contractors, decorators, ts and dealers in sand, stone, lime, imber and hardware, and other build- sites, tile, lime, and terra-cotta makers. capital, £80,000 in 75,000 £1 Preference nd 100,000 1s. Ordinary shares.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness.	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7½	7½	7½
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	11	11	10	9	9½	10	9	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	10½	10½	10½	9¾	10½	9½	7½	7½	7½
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	8¾	8¾	8½	8½	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8½	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10½	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5½	5½	5½
Huddersfield	11	11	9½	9½	10	9	8½	7½	7½	7½
Hull	10½	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10½	10½	10	10	8½	7½	7½	8
Leicester	10¼	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10½	10½	10	10	8½	7½	7½	8½
Newcastle-on-Tyne.	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10½	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7½
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9½	9½	9½	9½	8	9½	8½	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9½	10	9½	9½	9½	9½	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½†	10½	9½	10	10	9	7½	7½	7½
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6½
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7½
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9½	6½	7	7½
Stockton-on-Tees	10	10½	10½	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7½	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6½	6½	6½
Warrington	8½	10½	10½	10½	8½	10½	9½	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk *) ar advertised in this number**: Competitions, —; Contracts, iv.; Public Appointments, —; Auction Sales, xx. Certai conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bin themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be mad for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willin to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while ever endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 18.—**Dundee.**—DEMOLITION, ETC.—Demolition of old school buildings adjoining Wallacetown Public School, Dundee, and the removal of all material and debris arising therefrom, for the Dundee School Board. Conditions of contract, etc., of Mr. John E. Williams, Clerk of the Board, School Board Offices.

MARCH 18.—**Wallasey.**—ROOF.—For a small lean-to roof at the Generating Station, Limekiln-lane, Wallasey, for the Electricity Committee. Drawings, etc., at the Electrical Engineers' Office, Seaview-road, Liscard, Wallasey.

MARCH 21.—**Bradford.**—SHEDS.—The Corporation invite tenders for the following:—St. James's Market, temporary store sheds; Bolton-lane Abattoirs, temporary store sheds. General conditions of contract, etc., of the City Architect, Town Hall, Bradford.

MARCH 21.—**Manchester.**—CUBICLES.—For the erection of cubicles for nurses at the Withington Institution, Nell-lane, West Didsbury, near Manchester, for the B.G. Particulars of the Master at the Institution.

MARCH 21.—**Taunton.**—SHOP FRONT, ETC.—For new shop front and other alterations at No. 28, East-street, Taunton, for the Committee of Management of the Taunton Co-operative and Industrial Society, Ltd. Plans, etc., of Mr. F. W. Roberts, F.R.I.B.A., architect, 2, Hammet-street, Taunton.

MARCH 23.—**Aspatria.**—ADDITIONS.—Additions to the butcher's department of the Aspatria Industrial Co-operative Society, Ltd. Plans, etc., of Messrs. W. G. Scott & Co., architects and surveyors, Workington.

MARCH 23.—**Hunslet.**—BRICKLAYERS' WORK, ETC.—For bricklayers', joiners', plumbers', and ironmongers' work for three months for the B.G. Tender forms of Mr. Fred. M. Mee, Clerk to the Guardians, Union Offices, Glasshouse-street, Hunslet, Leeds.

* APRIL 1.—**Hayes.**—FIFTY-TWO WORKMEN'S DWELLINGS.—The Hayes U.D.C. invite tenders for erection of fifty-two workmen's dwellings.

NO DATE.—**Barry.**—COTTAGES.—The Barry Railway Company invite tenders for the erection of a pair of cottages at Southerndown-road station. Plans, etc., at the Engineer's Office, Barry Dock.

NO DATE.—**Harrogate.**—ADDITIONS, ETC.—For additions and alterations to the house, and the erection of new garage, at "The Old Parsonage." High Harrogate, for Mrs. A. Lawson. Names to the architects, Messrs. Bown & Crosland, 6, Princes-square, Harrogate.

NO DATE.—**Ripon.**—ALTERATIONS, ETC.—For proposed alterations and additions to "The Saracen's Head Hotel." North-street, Ripon, for Messrs. Hepworth & Co., Ltd. Messrs. Bland & Bown, F.R.I.B.A., architect, Harrogate.

FURNITURE, MATERIALS, etc.

MARCH 17.—**Cardiff.**—MATERIALS.—Supply to the Guardians of Cardiff Union of building materials and ironmongery, glass and glazing steam fittings. Forms of tender of Mr. Arthur J. Harris, Clerk, Union Offices, Queen's-chambers, Cardiff.

MARCH 17.—**Felixstowe.**—CEMENT, ETC.—Supply to the U.D.C. of asphalt, Portland cement, timber, etc. Specifications, etc., of Mr. H. Clegg, A.M.Inst.C.E., Engineer and Surveyor to the Council, Town Hall, Felixstowe.

MARCH 17.—**Hartlepool.**—OILS, PAINTS, ETC.—Supply to the Guardians for three months of oils, paints, varnishes, etc. Forms of tender, etc., of Mr. N. Jeffries, Clerk, Guardians' Office, Hart-road, West Hartlepool.

MARCH 18.—**Dudley.**—MATERIALS.—Supply to the Corporation of builders' materials for twelve months. Forms of tender, etc., of Mr. John Gammage, Borough Engineer and Surveyor, Borough Surveyor's Office, Town Hall, Dudley.

MARCH 20.—**London.**—PAINTS AND OILS.—Supply to the Guardians of Wandsworth Union, for a period of six months, of paints and oils, etc. Forms of tender of Mr. F. J. Curtis, Clerk, Union Offices, St. John's-hill, Wandsworth, S.W.

MARCH 20.—**Sutton Coldfield.**—MATERIALS.—Supply to the Corporation of builders' materials during the year ending March 31, 1917. Forms of tender, etc., of Mr. W. A. H. Clarry, Borough Engineer and Surveyor, The Council House, Sutton Coldfield.

MARCH 21.—**Brighton.**—MATERIALS.—Supply to the Guardians of painters', glaziers', and plumbers' materials. Forms of tender, etc., at the Guardians' Clerk's Office, Princes-street.

MARCH 21.—**Mitcham.**—MATERIALS.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Specifications, etc., at the Council Offices, Vestry Hall, Mitcham.

MARCH 22.—**Twickenham.**—MATERIALS.—Supply to the U.D.C. of builders' materials for one year. Forms of tender, etc., of Mr. Fred. W. Pearce, F.S.I., Surveyor to the Council, Town Hall, Twickenham.

MARCH 23.—**Cardiff.**—MATERIALS.—Supply to the Welsh Metropolitan War Hospital, Whitchurch, near Cardiff, of builders' materials. Forms of tender, etc., of Mr. T. D. Morgan, Clerk and Steward, War Hospital, Whitchurch, near Cardiff.

MARCH 23.—**Ogmore and Garw.**—MATERIALS.—Supply to the U.D.C. of builders' materials, etc. Forms of tender from Mr. W. T. Ollivant Jones, Engineer and Surveyor, Council Offices, Brynemnyn, Glam.

MARCH 23.—**Prescot.**—MATERIALS.—Supply to the Guardians of builders' materials for three or six months. Tender forms of Mr. A. F. Mann, Clerk to the Guardians, Union Offices, Whiston, Prescot.

MARCH 23.—**South Stoneham.**—CEMENT.—Supply to the B.G., from April 1, 1916, to June 30, 1916, of Portland cement, etc. Forms of tender, etc., of Mr. E. Wynter Cross, Clerk, the Workhouse, Westend, near Southampton.

ENGINEERING, IRON, AND STEEL.

MARCH 20.—**Foleshill.**—BACTERIA BEDS.—Construction of two circular bacteria beds with revolving distributors at the Sewage Works, Henley Mill, Foleshill, for the R.D.C. Plans, etc., of Mr. A. E. Newey, Engineer and Surveyor, Council Offices, Foleshill, near Coventry. Deposit, £2 2s.

MARCH 22.—**Manchester.**—SWITCHGEAR.—The Electricity Committee of the Manchester Corporation invite tenders for the supply, delivery, and erection of 6,600-volt three-phase, switchgear at Stuart-street Station. Specifications, etc., of Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester

ROAD, SANITARY, AND WATER WORKS.

MARCH 17.—**Hartismere.**—ROAD MAKING.—The Guardians invite tenders for making the roads at their new infirmary building. Plans, etc., at the office of the Clerk of Works, at the Infirmary.

MARCH 20.—**Chyverton.**—SANITARY ACCOMMODATION.—Tenders are invited, on behalf of Captain Thomas-Peter, for providing new sanitary accommodation, water supply, and other work at Chyverton, in Perranzabuloe. Plans, etc., of Mr. Alfred J. Cornelius, M.S.A., architect and surveyor, Truro.

MARCH 20.—**Earsdon.**—MATERIAL.—Supply to the U.D.C. of road material from April 1, 1916, to March 31, 1917. Specifications, etc., of the Surveyor, Mr. J. R. MacMillen, Council Offices, Shiremoor.

MARCH 20.—**Manchester.**—STREET RECON TION.—Reconstruction of Cambrian-street Gibbon-street) Bridge over the Ashton Ca the Improvement and Buildings Com Plans, etc., of the City Surveyor's Office, Hall, Manchester. Deposit, £2 2s.

MARCH 20.—**Reddish.**—REPAVING, ET paving a portion and the repair of a por Mill-lane, Reddish, near Stockport, for the Printers' Association, Ltd., St. James's-bui Oxford-street, Manchester. Specification, the Engineering Department. Deposit, £

MARCH 20.—**Skipton.**—MATERIALS.—Sup the U.D.C. of road materials during th ending March 31, 1917. Forms of tende Mr. Aldridge, Town Hall, Skipton.

MARCH 21.—**Barton-upon-Irwell.**—MAT Supply to the R.D.C. during the year March 31, 1917, of road material. F tender of Mr. A. H. Mountain, Surveyor, Offices, Patricroft.

MARCH 21.—**Foleshill.**—GRANITE.—Sup the R.D.C. of granite for the year March 31, 1917. Forms of tender of th veyor, Council Offices, Foleshill.

MARCH 21.—**Hazel Grove.**—MATERIAL.— to the Hazel Grove and Bramhall U.D.C. materials. Forms of tender, etc., of Severn Doncaster, Surveyor, Council Hazel Grove.

MARCH 21.—**London.**—WOOD PAVING BL Supply to the L.C.C. of wood paving blo use in the Tramways Department for a p twelve calendar months from April 1 Form of tender, etc., from the Chief L.C.C. Tramways, 62, Finsbury-pavement

MARCH 21.—**Stroud.**—GRANITE, ETC.—Su the U.D.C. of granite, basalt, limesto tarred macadam for twelve months. F tender from Mr. E. Northam Witchell, the U.D C., 1, Lansdown, Stroud, Glos.

MARCH 21.—**Sutton Bridge.**—GRANITE, Supply to the U.D.C. of granite, slag, sa Mr. Leopold C. Harvey, Clerk to the Market-place, Spalding.

MARCH 22.—**Hull.**—MACADAM.—Supply Corporation of macadam for twelve Forms of tender, etc., of Mr. F. W. B City Engineer, Guildhall, Hull.

MARCH 22.—**Strood.**—MATERIAL.—Suppl R.D.C. of highway material. Specifi etc., of the Surveyor, Mr. L. Rande Meopham, near Gravesend.

MARCH 23.—**Clayton-le-Moors.**—MAT Supply to the U.D.C. of road materia April 1, 1916, to March 31, 1917. F tender of Mr. A. Dodgeon, Assoc.M.In Surveyor to the Council, Council Offices, le-Moors.

MARCH 23.—**Longbenton.**—WHINS Supply to the U.D.C. of hand-broken w for the repair of the roads during t ending March 31, 1917. Specifications, et Mr. William Bean, Highway Surveyor, Offices, Forest Hall.

MARCH 23.—**Newburn.**—MATERIALS.—Su the U.D.C. of highway materials dur year ending March 31, 1917. Particular Surveyor, Mr. Thomas Gregory, Council Newburn-on-Tyne.

MARCH 23.—**Wigston Magna.**—GR. Supply to the U.D.C. of broken granite year ending March 31, 1917. Particula the Surveyor to the Council, Mr. W. G. J Station-road, Wigston Magna.

NO DATE.—**Wycombe.**—FLINTS.—Suppl R.D,C. of flints for the repair of the roads. Forms of tender, etc., of Mr. A Grant, 15, High-street, High Wycombe.

Auction Sales.

* MARCH 21.—**Lower Clapton.**—Mr. Smith will sell by auction, on the prem machinery and stock of a joinery, pack showcase manufacturer.

* MARCH 23.—**Balham.**—Messrs. J. G. Co. will sell by auction, on the building materials and builders' plant.

[Those with an asterisk (*) are advertised in this issue.]

CES CURRENT OF MATERIALS.

ng to the exceptional circumstances which l at the present time, prices of materials l be confirmed by inquiry.]

e our last issue timber, metals, and oils and lead have been increased.—Ed.

ur aim in this list is to give, as far as possible, the e prices of materials, not necessarily the highest est. Quality and quantity obviously affect prices ct which should be remembered by those who use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
tocks	2 0 0
l Stocks for Facings	2 12 0

r 1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
ns	1 10 0	Best Blue Pressed Staffordshire	4 14 0
Fareham	3 12 0	Do. Bullnose	4 18 6
edPressed bon Facing	5 5 0	Best Stourbridge Fire Bricks	4 14 0
D Bricks—			
White,		D'ble Str'tch'rs	17 17 6
ry, and		Double Headers	14 17 6
Glazed tchers	12 7 6	One Side and two Ends	18 17 6
rs	11 17 6	Two Sides and one End	19 17 6
s, Bullnose 4½ in. s	15 17 6	Splays and Squints	17 7 6

Second Quality £1 per 1000 less than best.

	s. d.	
es Ballast	7 9	per yard, delivered.
es and Pit Sand	8 0	,, ,, ,,
Vashed Sand	9 0	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
Portland Cement	2 5 0	..	2 8 0

£2 1s. alongside in 80-ton lots.

crete 2s. 6d. per ton extra on above.

Ground Blue Lias Lime.... 1 5 6 at rly. depôt.

—The cement or lime is exclusive of the ordinary charge for sacks.

Stone Lime .... 18s. 0d. per yard delivered.

bridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
Stone—delivered in railway trucks at stbourne Park, Paddington, G.W.R., or th Lambeth, G.W.R., per ft. cube	1 7
o. delivered in Railway trucks at Nine s, L. & S.W.R., per ft. cube	1 8¾
o. delivered on road waggons, Nine Elms pôt	1 9¼
and Stone—	
wn Whitbed, in random blocks of 20 ft. verage, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, .W.R., or Nine Elms, or L. & S.W., per ft. ube	2 5½
do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2 6½

ite Basebed, 2d. per ft. cube extra.

om Blocks—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
ter in blocks	2 0	Closeburn Red Freestone	2 2
n blocks	1 7¼	Red and White Mansfield Random block	2 9
ill in blocks	2 4	Yellow Magnesian Limestone do. do.	3
y Dale in cks	2 5		

Stone—*Robin Hood Quality.*

er Ft. Cube, Delivered at Railway Depôt.	s. d.
led random blocks	3 4
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landings to sizes (under t. super.)	2 5
ubbed two sides ditto, ditto	2 8
. sawn two sides slabs (random sizes)	1 0½
o 2½ in. sawn one side slabs (random sizes)	0 8¼
to 2 in. ditto, ditto	0 6¾

York—

	s. d.
Per Ft. Cube, Delivered at Railway Depôt.	
led random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
awn two sides landing to sizes (under 40 ft. er.)	2 3
ubbed two sides ditto	2 7
awn two sides slabs (random sizes)	1 0
elf-faced random flags	0 5

TILES.

Per 1000 f.o.r. London.

	£ s. d.
nachine-made tiles or hand-made sand-d tiles from either Broseley or fordshire district	2 12 6
nental ditto	2 15 0
nd valley tiles (per dozen)	0 5 6

SLATES.

Per 1000 of 1200 f.o.r. London.

	£ s. d.
Blue Bangor slates, 20 by 10	11 16 0
quality ,, ,,	11 10 0
,, 16 by 8	5 15 0
Blue Portmadoc, 20 by 10	11 13 6
quality ,, ,,	11 3 6
,, 16 by 8	5 15 0

WOOD.

ber prices should be confirmed, as the market is *changing daily.*

Building Redwood.

Imported sizes.	Per standard. £ s. d.		£ s d.
: 4 in. by 12 in., 4 in. y 11 in., 3 in. by 11 in., in. by 9 in., and 2 in. y 11 in.	33 0 0	..	34 0 0
. by 9 in., 2½ in. by 9 in., nd 2 in. by 9 in.	32 0 0	..	33 0 0

WOOD (*Continued*).

Best Building Redwood. Per standard.

	£ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	31 0 0	..	32 0 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.	
¾ in.	1 0 0		
Seconds: building quality deals, battens, boards, and scantlings	1 0 0	less than best.	
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 10 0 0	..	—
Seconds do. do.	9 10 0	..	—
9 in. to 10 in. do.	8 10 0	..	—
6 in. to 8 in. do.	8 0 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	10 0 0	..	11 0 0
Do. 6 in. to 10 in.	9 0 0	..	10 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Under 2 in. thick	0 10 0		extra.

Joiners' Wood.

White Sea First Quality Red: 4 in. by 11 in.	39 0 0	..	40 0 0
3 in. by 11 in., and 2 in. by 11 in.	38 0 0	..	39 0 0
4 in. by 9 in.	37 0 0	..	38 0 0
3 in. by 9 in., and 2½ in. by 9 in.	36 0 0	..	37 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	33 0 0	..	34 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Seconds quality	2 0 0		less than best.
Third quality	£2 to £3		less than seconds.
Archangel White Deals—			
Best 3 in. by 9 in. and 10 in. and 11 in.	36 0 0	..	37 0 0
Seconds, do.	2 0 0		less than best.
U.S. Battens	30 0 0	..	32 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 6½ in. planed and shot	1 16 0	..	1 19 0
1¼ in. by 6½ in. planed and matched	1 16 6	..	1 19 6
1 in. by 6½ in. planed and shot	1 9 0	..	1 12 0
1 in. by 6½ in. planed and matched	1 9 6	..	1 12 6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1 4 0	..	1 6 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
⅝ in. by 6½ in. do.	1 0 0	..	1 1 0

	Per standard.		
Columbian or Oregon Pine, best quality	42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		,,
Seconds, regular sizes	43 10 0		,,
Oddments	37 10 0		,,
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6 upwards.
Dry Walnut, American, per super, as inch	0 1 0	..	0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

METALS (*Continued*).

Per ton, in London.

	£ s. d.		£ . d.
Iron—			
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0
Steel Bars, Ferro-Concrete quality, £18 basis price.*			
Hoop Iron, basis price	19 10 0	..	20 0 0
,, ,, Galvanised	30 0 0	..	35 0 0

(* And upwards, according to size and gauge.)

Sheet Iron Black—			
Ordinary sizes to 20 g.	19 10 0	..	20 0 0
,, ,, 24 g.	20 10 0	..	21 0 0
,, ,, 26 g.	21 10 0	..	22 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	30 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	31 0 0	..	—
,, ,, 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g.	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20 10 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	20 15 0	..	—
Best Soft Steel Sheets, 26 g.	22 10 0	..	—
Cut Nails, 3 in. to 6 in.	21 0 0	..	21 10 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
Lead—Sheet, English, 4 lb. and up		39 0 0	..	—
Pipe in coils		39 10 0	..	—
Soil pipe		42 10 0	..	—
Compo pipe		42 10 0	..	—

Note—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

Copper—				
Strong Sheet	per lb.	0 1 5	..	—
Thin ,,	,,	0 1 6	..	—
Copper nails	,,	0 1 5	..	—
Copper wire	,,	0 1 5	..	—
Brass—				
Strong Sheet	,,	0 1 3	..	—
Thin	,,	0 1 4	..	—
Tin—English Ingots	,,	0 1 11	..	—
Solder—Plumbers'	,,	0 0 10	..	—
Tinmen's	,,	0 1 0	..	—
Blowpipe	,,	0 1 2	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
26 oz. thirds	7d.	Fluted Sheet, 15 oz.	5¾d.
,, fourths	6½d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 11
,, ,, ,, in barrels	,,	0 4 0
,, ,, ,, in drums	,,	0 4 3
Boiled ,, ,, in barrels	,,	0 4 2
,, ,, ,, in drums	,,	0 4 6
Turpentine in barrels	,,	0 4 1
,, in drums	,,	0 4 4
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	51 5 0
Red Lead, Dry	per ton	56 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
Genuine White Lead Paint— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	62 15 0

VARNISHES, &c.

	Per gallon, £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

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1,771 of 1915.—John Ernest Mortimer: Swivels and shackles.

1,826 of 1915.—Arthur Herbert Curtis: Heating apparatus.

2,026 of 1915.—Louis Daumas: Seatguards or water-closets.

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2,257 of 1915.—Samuel Ingham: Military huts, bungalows, and other buildings and structures.

4,257 of 1915.—Frederick Charles Woodford: Composite roofings.

4,289 of 1915.—Peter Ford & Sons, Ltd., and Harry Ford: Composition and process for making the same for moulding or forming articles such as light-reflectors or shades, vases, or the like, or decorative slabs for partitions, wall or ceiling covering, or the like.

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7,247 of 1915.—John Donnelly and John McGinley: Hinges.

9,369 of 1915.—Kenneth Aird: Burners for gas fires.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BARNSLEY.—For cleansing and painting the long block at Kendray Hospital, for the Barnsley Town Council. Mr. J. H. Taylor, M.Inst.C.E., Surveyor, Manor House Offices, Barnsley:—

J. Snowden & Son, Market-street, Barnsley*	£149 15

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

CASTLEBLAYNEY.—For erection of a brick chimney shaft at Fane Valley Creamery, Altnamackin, Castleblayney, for the Fane Valley Co-operative Association and Dairy Society, Ltd.

Reading Boiler Setting Co., Land-chambers, Reading	£152

HOVE.—For alterations and additions to the electricity works, Davigdor-road, for the Town Council. Mr. H. H. Scott, Borough Surveyor:—

J. Parsons & Sons, 176, Church-road, Hove*	£345

LONDON.—For painting at the Camden Town fire-station, for the London County Council:—

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A. Monk	277	0
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F. & T. Thorne	260	0
Vigor & Co.	252	3
L. H. & R. Roberts	248	14
J. C. Mather*	170	0

NEATH.—For repairs, etc., to Drymma Mansion, for the Glamorganshire Joint Poor Law Establishment Committee:—

Arnold Bros., Clydach-on-Tawe*	£2,500

OAKDALE (Mon.).—For erection of a workmen's institute at Oakdale Village, for the Oakdale Institute Committee. Mr. A. F. Webb, M.S.A., architect and surveyor, Blackwood, Mon.:—

T. C. Glugas	£5,683
Lloyd & Hopkins	5,534
L. & R. Lewis	5,472
R. Moon	5,150
R. Jones	4,997
E. H. James	4,749
E. Walters & Sons, Bristol*	4,749
Building and Public Works Construction Co., Ltd.	4,399

SWANSEA.—For electric lighting at the Brynmill and Cwmbwrla Schools, for the Swansea School Buildings Committee:—

W. Law, Chancery-chambers, Rutland-street, Swansea*	£560

TO CORRESPONDENTS.

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The responsibility of signed articles, letters, a papers read at meetings rests, of course, with the autho

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All drawings sent to or left at this office for consider tion should bear the owner's name and address either the face or back of the drawing. Delay a inconvenience may result from inattention to this.

Any commission to a contributor to write an artic or to execute or lend a drawing for publication, is giv subject to the approval of the article or drawing, wh received, by the Editor, who retains the right to reje it if unsatisfactory. The receipt by the author of proof of an article in type does not necessarily imply i acceptance.

N.B.—Illustrations of the First Premiated Design any important architectural competition will always accepted for publication by the Editor, whether th have been formally asked for or not.

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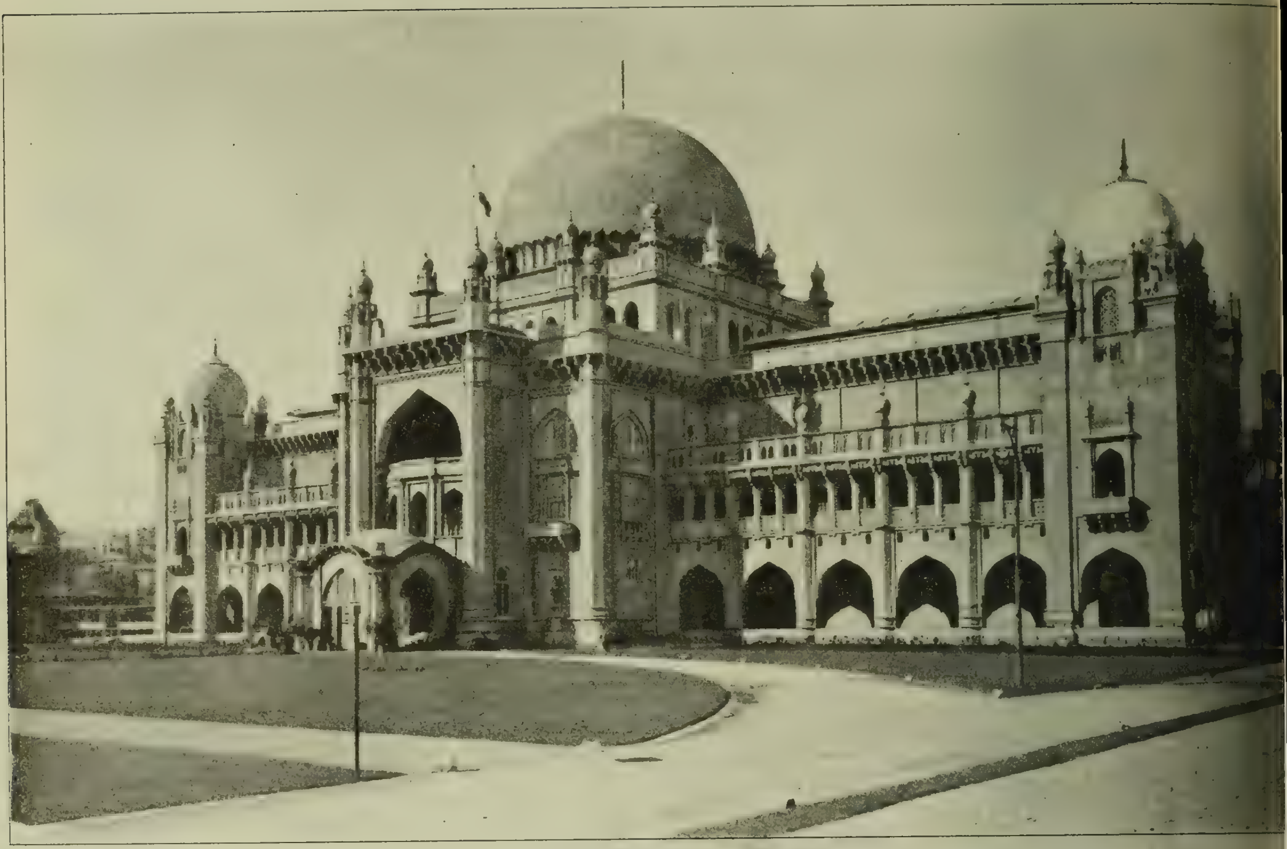
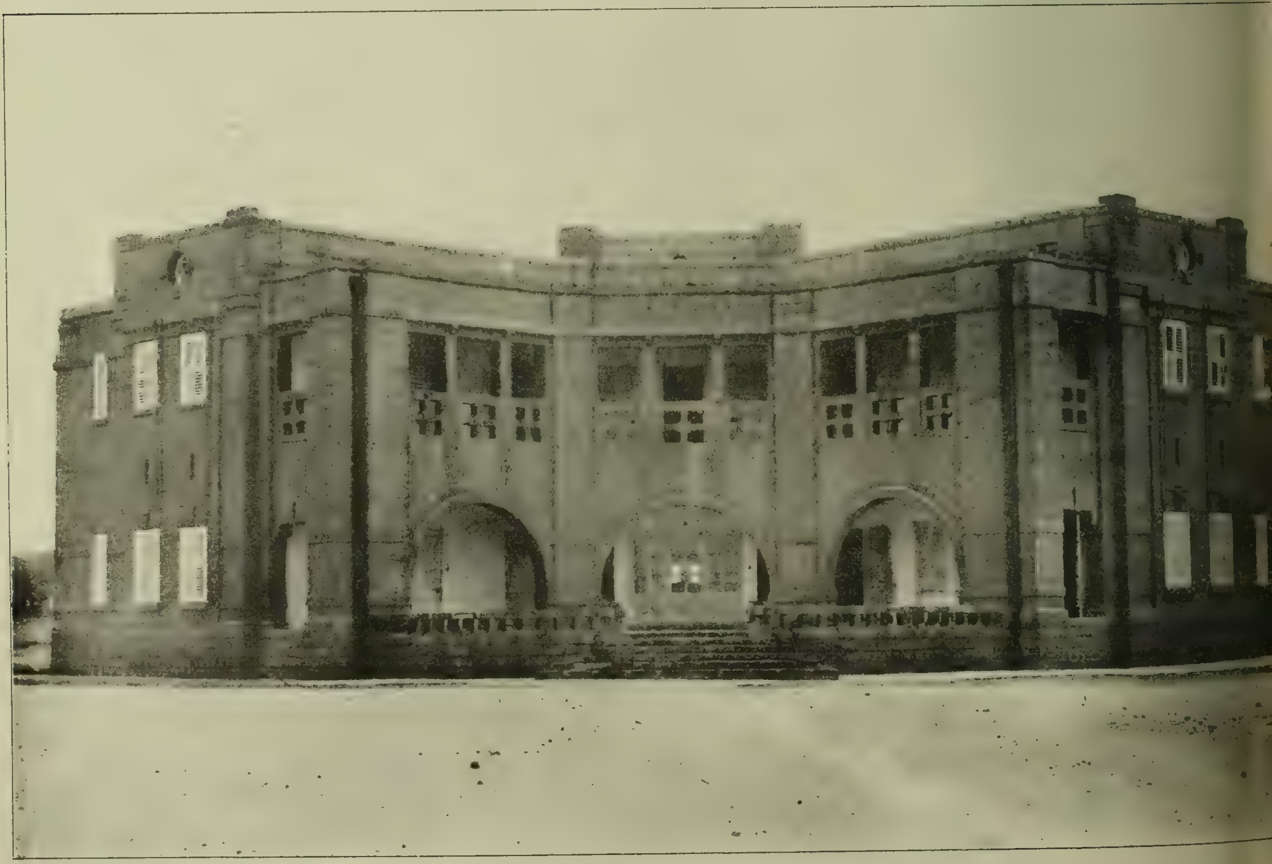


PRINCE OF WALES MUSEUM, BOMBAY: Exterior of Arts Building.—Mr. G. Wittet, Architect.



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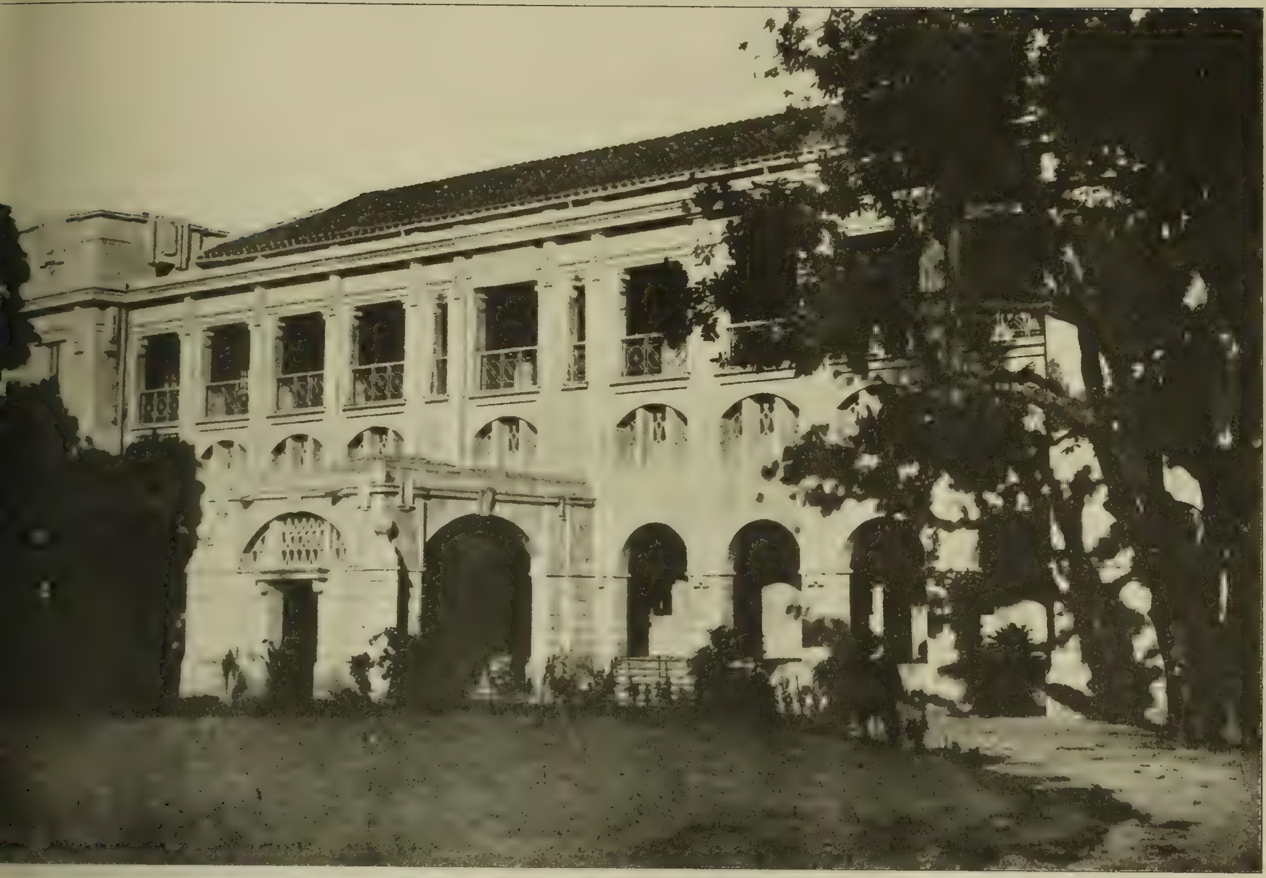
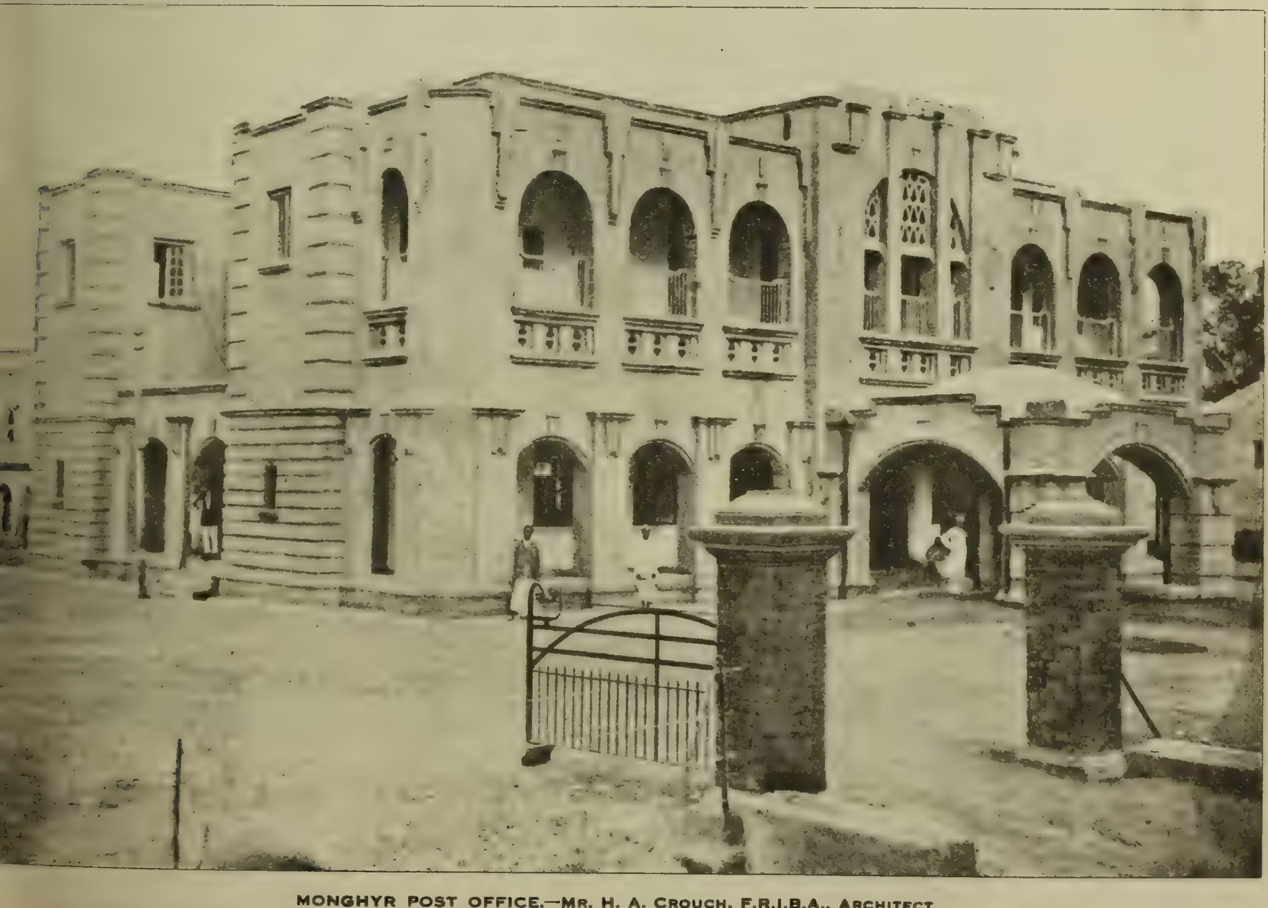


ALLAHABAD POST OFFICE: PRINCIPAL FRONT.—MR. J. BEGG, F.R.I.B.A., ARCHITECT.



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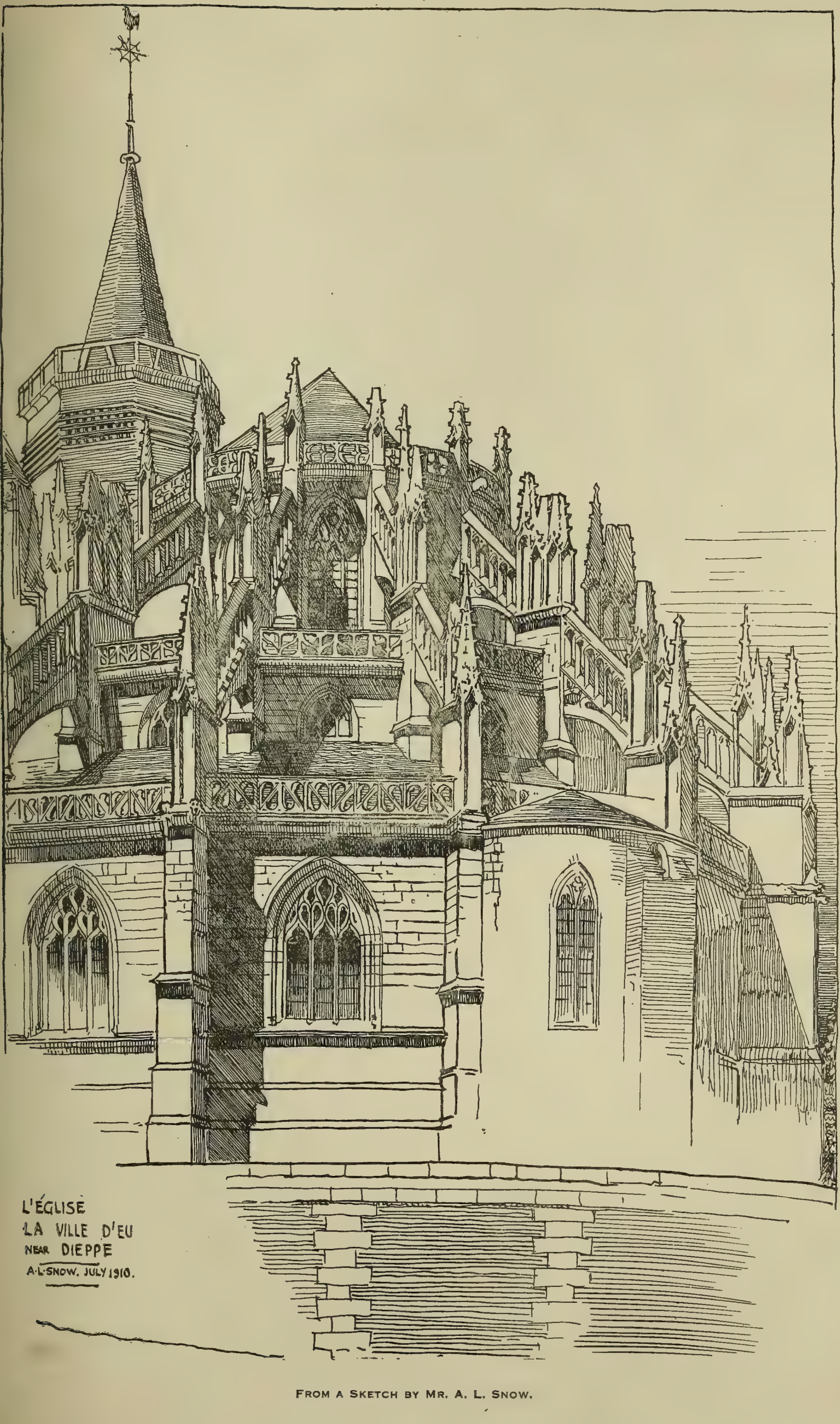

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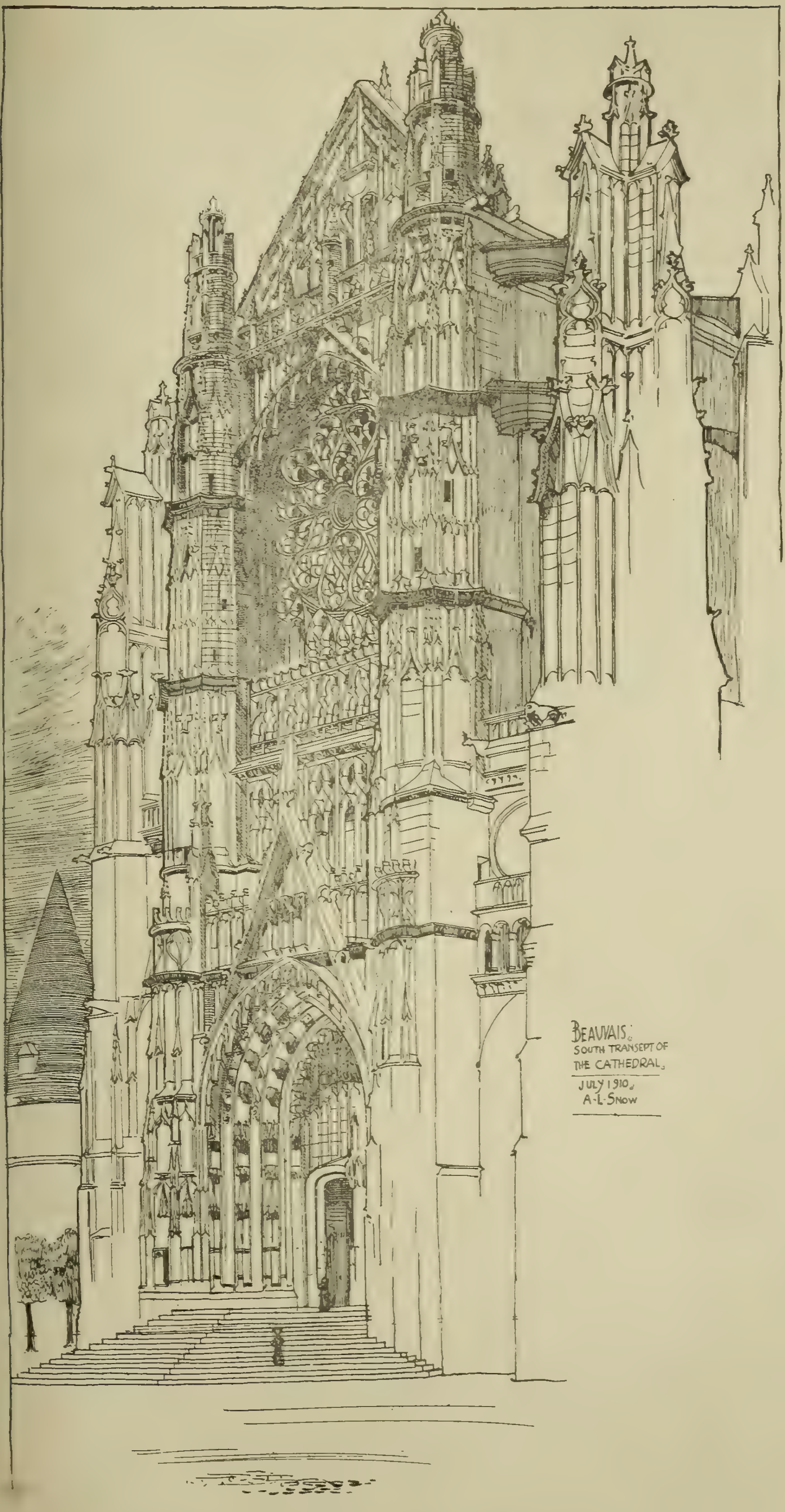

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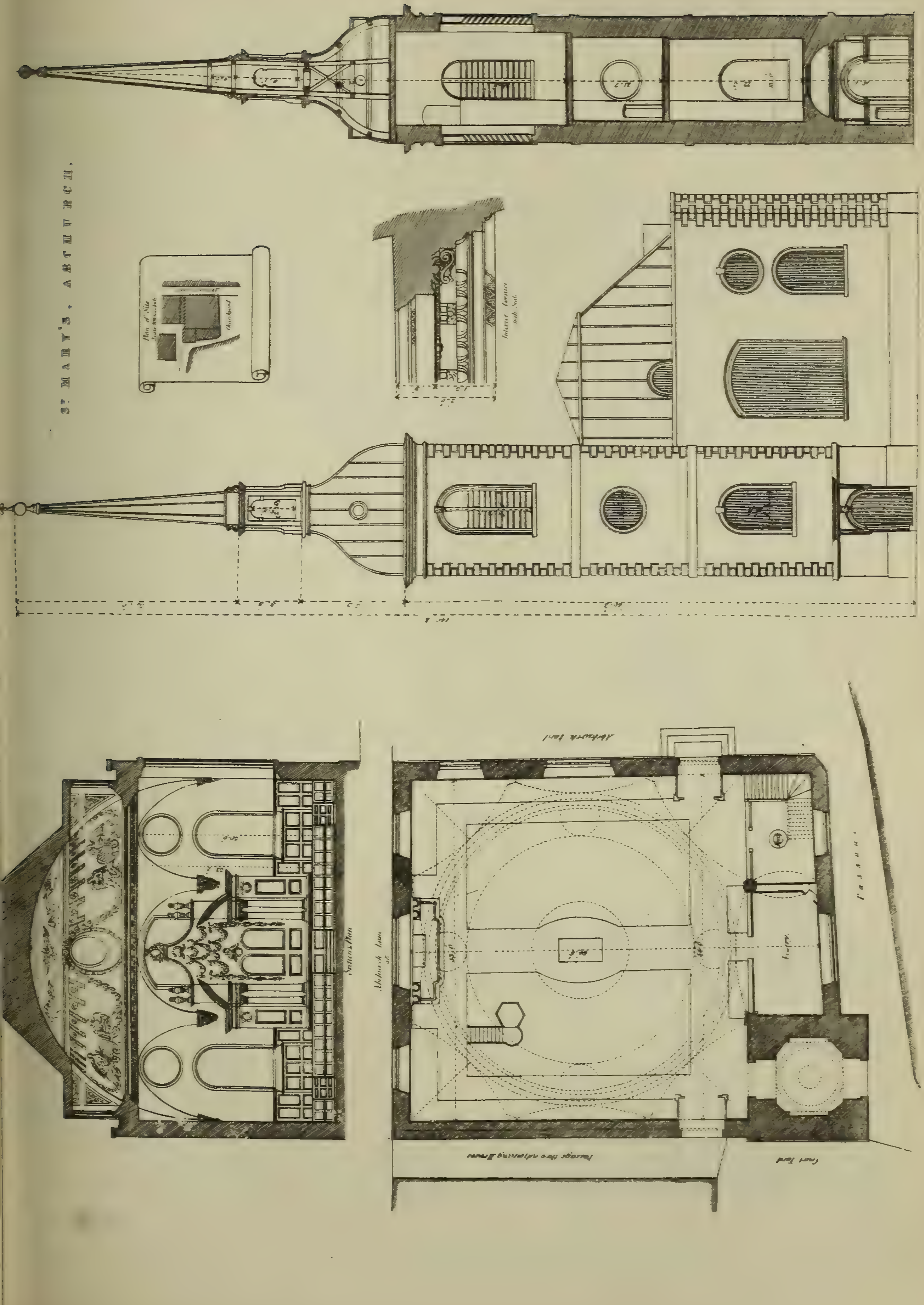

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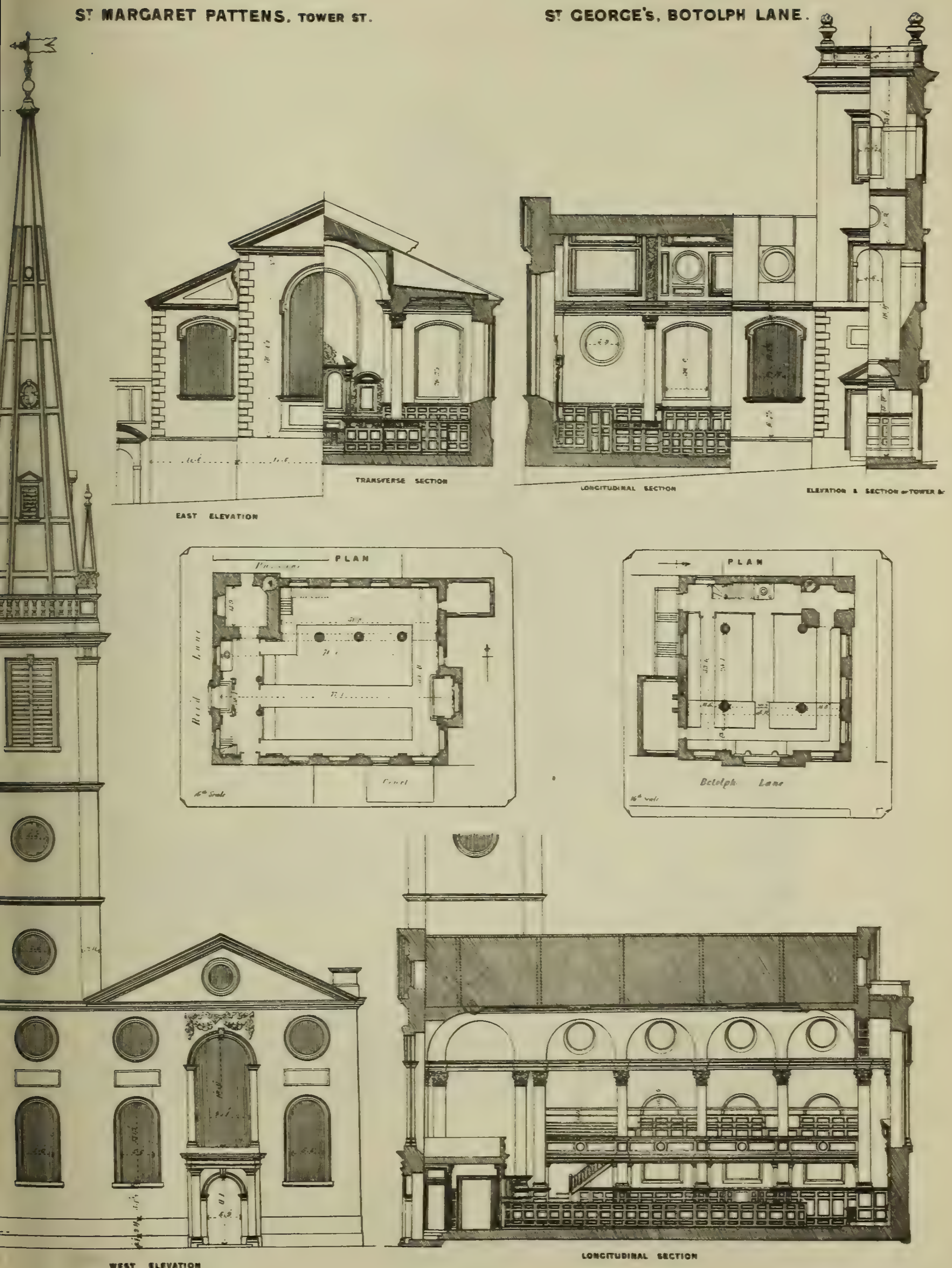

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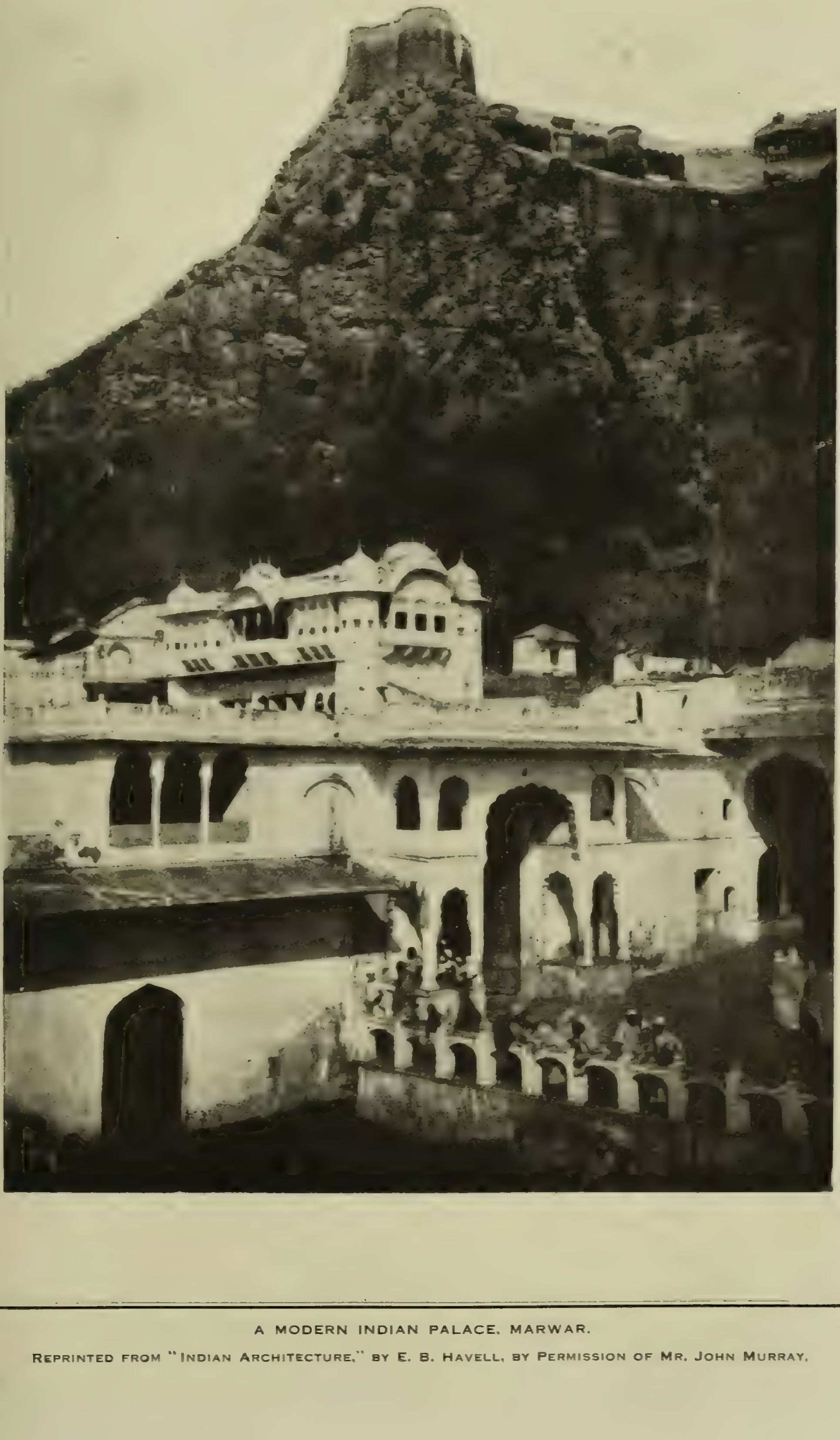

A MODERN INDIAN PALACE, MARWAR.

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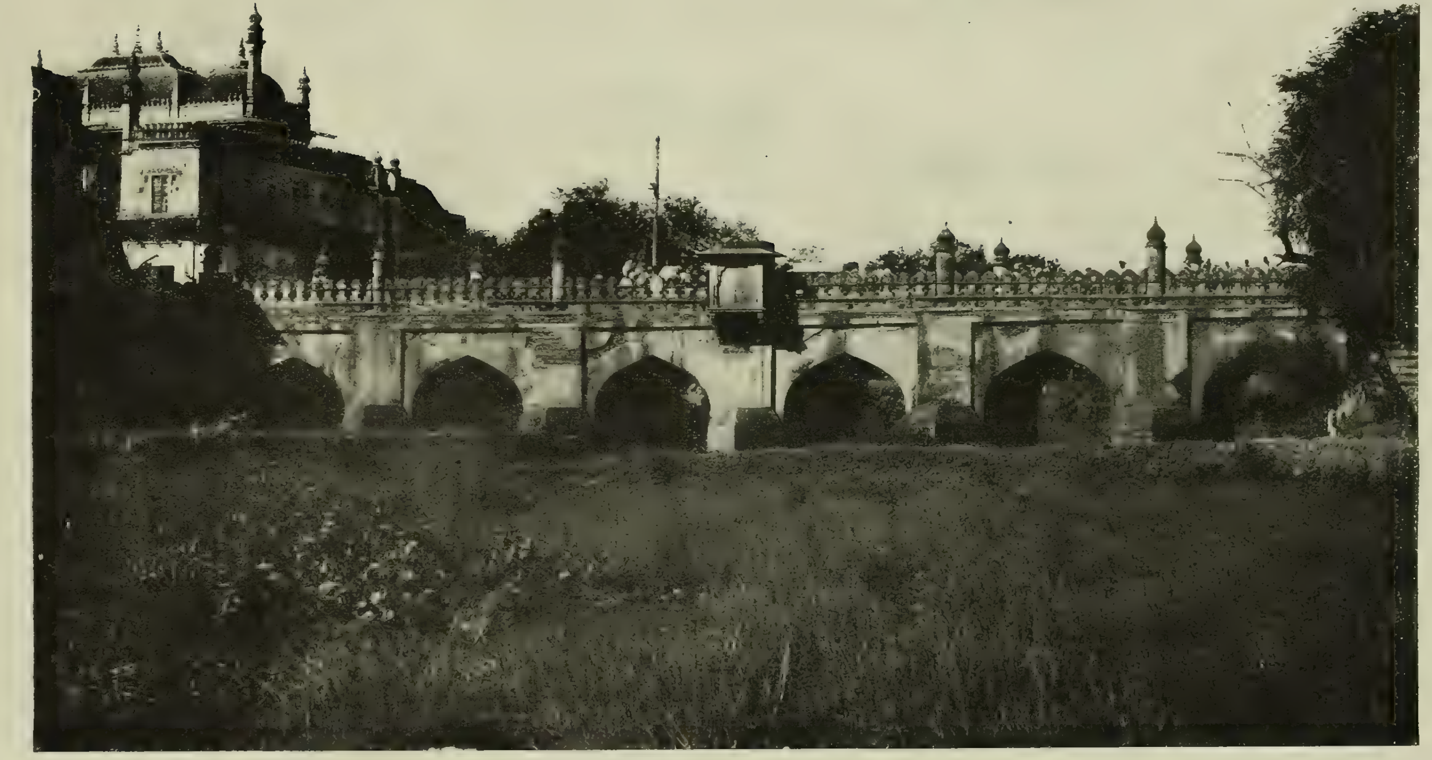

A MODERN MASTER BUILDER'S BRIDGE, LASHKAR.

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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

OL. CX.—No. 3816. MARCH 24, 1916.

LIVING ART.

A REVIEW of the great architectural periods of history reveals a fact which we believe is frequently lost sight of now, and which partially accounts for the poverty of the architectural results which distinguish the work of the present day. In past the architect, whether in the form of a master son or master craftsman of mediæval times, or in that of the hitects of the early Renaissance period, trained in a *bottega* familiar with the allied arts, both in practice and theory, y be said to have held the view that art was one and ivisible. We cannot imagine the designers of the great rks of mediæval France employing sculpture as an accessory ture; they were rather working, in conjunction with the agers, to create a masterpiece by the means of the common d of skill, which was the heritage of the craftsmen of the day. The mediæval cathedral and the mediæval bridge were e the expression of the greatest engineering knowledge of age; in fact, it is very questionable whether, given stone ne as a means of structure, the most skilful modern engineer ld produce anything more scientific than the vaults and ports of Reims, Amiens, and Beauvais, or more intricate n Henry VII.'s Chapel. The mediæval builders at the mination of the Gothic period, whether we call them master sons, architects, imagers, or sculptors, put the whole owledge and skill of the times into the solution of the blems before them, with the result that the buildings erected pass those of later ages in unity of conception and the ression of power.

The Greeks consciously limited their constructive problems, ich were neither complicated nor difficult; but their architece, divorced from its sculptural accessories, would be incomplete npared with the results which were produced. The Greek nple without its sculptured pediment would never have ressed the world with the sense of matchless perfection ich we admire, nor can there be a doubt that the exponents the two arts worked side by side in absolute co-operation understanding of each other's objects.

In Egyptian architecture it is painting rather than sculpture ich was called to the aid of architecture, but the pages of ampollion show how much the Egyptian painters added to meaning of architecture, and how completely the two arts e interdependent on one another; and in the days of the naissance we see the added effect given to architecture by men who more thoroughly than any other understood the relation and interdependence of the arts. In the case of red Stevens, two of whose drawings we illustrate in this ie, we see how the systematic study of the three arts enabled nan who lived in a nadir of European artistic history to duce a work such as the Wellington Memorial, in which we e the expression of architectural and sculptural art as one ivisible unit, not as accessory additions to one another; ereas now architect and sculptor pursue their ways independently, calling upon each other's help when the essential es of structure are too far advanced to permit the combined ression of art as a whole. So in our bridge building the hitect is eliminated except in a subordinate capacity, in ich he is called in to tone down mistakes which are radicable and which absolutely mar a whole conception. is difficult in the complexity and specialisation of our modern to suggest an adequate remedy. Few of our architects ve the means or the enthusiasm and love for art which can place means to follow in the steps of Stevens and give the st years of their lives, not to gaining connection and clients, but to acquiring such a knowledge of art as a whole as will enable them to deal with its greater problems; nor, it must be added, could many achieve the results produced of a great genius like Stevens; though, on the other hand, we doubt not that if forty architectural students followed in his footsteps year by year the whole history of modern English architecture would be revolutionised.

The other alternative seems to require specialisation in the direction of effort and determination to seek fortune along certain considered lines, and involves the architect whose bent is to undertake the solution of great constructional problems like bridge building, factory and warehouse construction, and railway architecture, associating himself not with another architect but with an engineer. No man can call in and work in perfect harmony with an expert in another calling—which is what satisfactory design necessitates; but if he undertakes his life work in partnership with such a man the two will learn to understand each other's principles and will know exactly where and how they can best employ their joint efforts. In the same way the architect who seeks his fortune in the direction of the solution of monumental design would be immensely aided by working in partnership with a sculptor, a painter, or with both; it is, we feel, in some such manner alone that we can again produce living art. Mr. T. P. Bennett, A.R.I.B.A., has written a useful little book entitled "The Relation of Sculpture to Architecture"* which should serve a useful purpose in calling attention to a very important subject which is little understood. The greater architectural success of modern French work is due not alone to the better education acquired by the average French architect, but also to the recognition that architect and sculptor should understand the principles of each other's arts and work together for a common end. The design of the modern French monument is the result of the closeness of this co-operation, and in many cases they are worthy successors of the great works of the Renaissance; whereas in this country if all the monuments erected during last century could be swept away we should be gainers and not losers on a balance.

But no manuals for the architect can enable him to dispense with the personal co-operation of the sculptor, and it may be suggested that if our students spent a year or a year and a half studying side by side with sculptors in the schools they would fully understand this themselves. It is only the uninitiated and the ignorant who will ever underrate the complexity and intricacy of the problems of another art or imagine that in their own person they can ever be absolute arbiters in matters of æsthetics. The genius of Stevens, stimulated by years of training, enabled him to design and carry out a great monument which belongs to architectural and sculptural art alike; but the training he had would not have enabled him to cope with a practical problem without a further long period of apprenticeship. Our work must always be undertaken with a knowledge that we are handicapped by the short span of human life, that limitation which prevented the genius of Stevens from being of the service it might have been to humanity and art.

Only by co-operation and understanding can we emulate the work of the artists of the past, which was the result of the collective work of artists in different types; only in that way can living art be produced and the sum of beauty increased in spite of the eternal truth of the saying, *Ars longa, vita brevis est.*

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* "The Relation of Sculpture to Architecture." By T. P. Bennett, A.R.I.B.A. [(Cambridge University Press.)

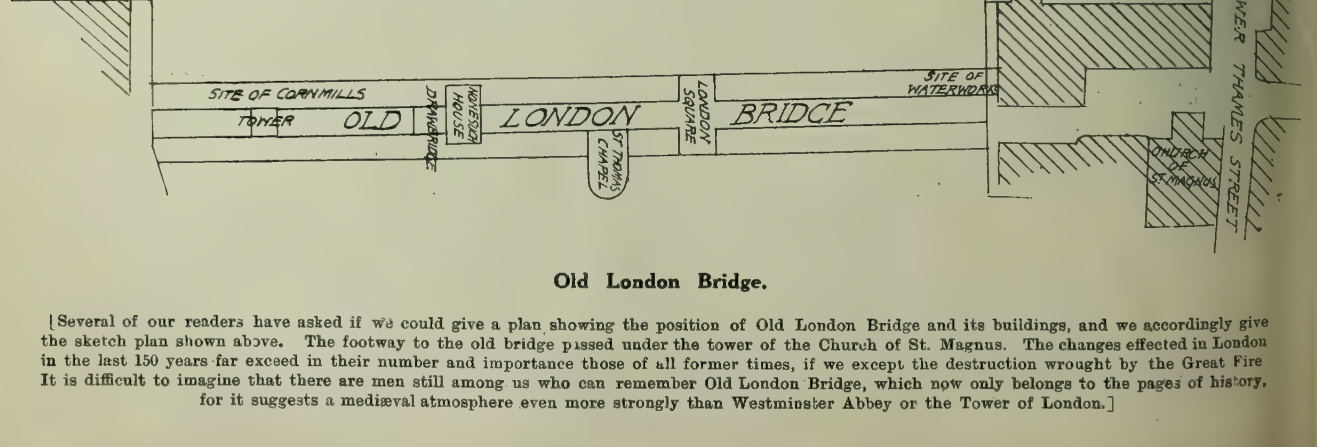
NOTES.

An Act of Justice. THE competition for new Government buildings at Ottawa which Mr. Collcutt assessed some time ago proved abortive, and the labour of the selected architects who have had to compete both in the preliminary and final competitions has been thrown away through the Government's determination not to proceed with the scheme. Seeing that the Canadian Houses of Parliament have been reduced to ashes and must presumably be rebuilt, and that one at least of the competitors must have proved his capacity to design a great scheme, it seems to us that the Canadian Government might in justice appoint the selected competitor for the abandoned Government Offices as architect for the new Parliament Offices. In this manner they would win the appreciation which all feel for fair-dealing and honourable recognition of the just claims of professional men, and we are convinced that the result would be one which would satisfy our kinsmen beyond the seas. The history of competitions in England has included many cases where injustice has been done to professional men, though these cases are, we are glad to record, becoming of rarer occurrence. In the Dominions the system is in an earlier stage of development, and the effect of fair and generous dealing would prove of even greater value.

War and Rent. THE National Housing and Town Planning Council are to consider a Memorandum prepared by their Secretary setting forth the difficulties arising out of the position of the married soldier under the Derby scheme. As we all know, the married man who is called up has in many cases to relinquish work which enables him to pay his way and in military service assume liabilities which his pay and separation allowance can in no way cover. Three cases are given to emphasise the serious nature of the problem—that of a skilled workman, earning 35s. a week, who has invested part of his wages in buying a house on the instalment principle; a young clerk who rents a small house at £22 a year and who finds his salary of £3 a week reduced to £1 1s.; and an architect who by his personal endeavours has been making £400 a year and will find himself in receipt of barely £60 in its place. It is pointed out that any measures taken must be equitable in securing that each case shall be treated on its merit and that the home of each soldier should be regarded as equally worthy of maintenance. It is urged that the term "slacker" will be most applicable to those who do not see that steps are taken to secure justice for those on whom the burden falls. The proposal that the men called up shall be simply relieved of the legal obligations they have incurred does not meet the case, nor does the moratorium proposal if interpreted simply as a close period during which claims cannot be pressed. It is urged that such claims should be paid not by the individual, but by the nation for whom the sacrifice is made, and that it is unfair to leave the question in suspense. The whole subject is a most important one, and the Council should be able to do much service if it can formulate a really workable proposal to obviate injustice.

The Royal Institute of Painters in Water-Colours. THE winter exhibition of the Royal Institute Painters in Water-Colours contains much wo which, though pleasing, is mediocre in quality a commonplace in conception; but, as usual, the are a few pictures of marked and outstandi quality. The finest figure subject is the pictu by Mr. J. Hassall, R.I., entitled "The Red Cushions (No. 464), showing a woman in mediæval costume seated amo cushions. It is a magnificent study of colour, forceful and effecti and at the same time peculiarly soft and liquid in rendering a treatment. Mr. John E. Aitken sends "Veere, Holland," which giv a very clever effect of atmosphere and chiaroscuro, suggestive the old Dutch masters. Another fine picture is the same artist's "O Amsterdam" (No. 433). No. 533, "Kismet," by Mr. Dudley Hard R.I., is a delightful example of strong clear colouring which no o should miss seeing. The exhibition contains a large number of go pictures of architectural subjects, but we should be glad to see so of the commonplace and sentimental renderings of hackneyed subje eliminated from this and other exhibitions; they are a wearine to the flesh and eye, and tend to spoil our enjoyment of the pictu of exceptional merit. It is certain that if four-fifths of the pictu could be weeded out of many of our galleries we should obtain more pleasure and profit from those which remained; but until t few exceptional pictures become "old masters" we shall not s them in favourable environment.

The Friday Club's Exhibition. AT the present time we should be grateful f anything which gives us a little temporary relaxati from depression, and therefore we owe a gre debt of gratitude to those who have brought togeth the amazing collection of artistic eccentriciti which are now on view at the Gallery of the Alpine Club. T perverted ingenuity of a clever child recovering from the effects a severe nightmare, a superb indifference to established cano and to the opinion of normal human beings, must be needed befo any of the painters whose works are exhibited could consent allow them to be shown at all. We can imagine the artists—bo Cubists and Futurists—pleasantly discussing among themselves t extent to which the public can be impressed by their matchle effrontery. Where all is so amusing it is difficult to pick out th which is supremely so; but we may mention Miss Mary Creighton "Bird Tree" (No. 82), in which every bough of what appears to a badly-drawn "monkey-puzzle" is occupied by a brightly-colour bird of no known variety. No. 58, "Dives and Lazarus," by the sa artist, is almost equally quaint, and never, we believe, has a mo poverty-struck Dives been presented; it may serve as an allego to represent that wealth is in reality mere dross. We have a Futuri representation of the "Tomb of Napoleon" by Miss D. E. Bre (No. 98), two delightfully quaint Cubist war pictures by Mr. C. R. Nivenson, a charming study of "Still Life" by the inimitab Mark Gertler (No. 17), and a number of other notable works. W have never seen a farce or read an extravaganza which is mo entertaining, and no one who needs amusement should miss th opportunity of obtaining it by omitting to visit the exhibition.



Old London Bridge.

[Several of our readers have asked if we could give a plan showing the position of Old London Bridge and its buildings, and we accordingly give the sketch plan shown above. The footway to the old bridge passed under the tower of the Church of St. Magnus. The changes effected in London in the last 150 years far exceed in their number and importance those of all former times, if we except the destruction wrought by the Great Fire It is difficult to imagine that there are men still among us who can remember Old London Bridge, which now only belongs to the pages of history, for it suggests a mediæval atmosphere even more strongly than Westminster Abbey or the Tower of London.]

E LONDON CHURCHES)F WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

XXII.—The Pseudo-Gothic Works of Wren.

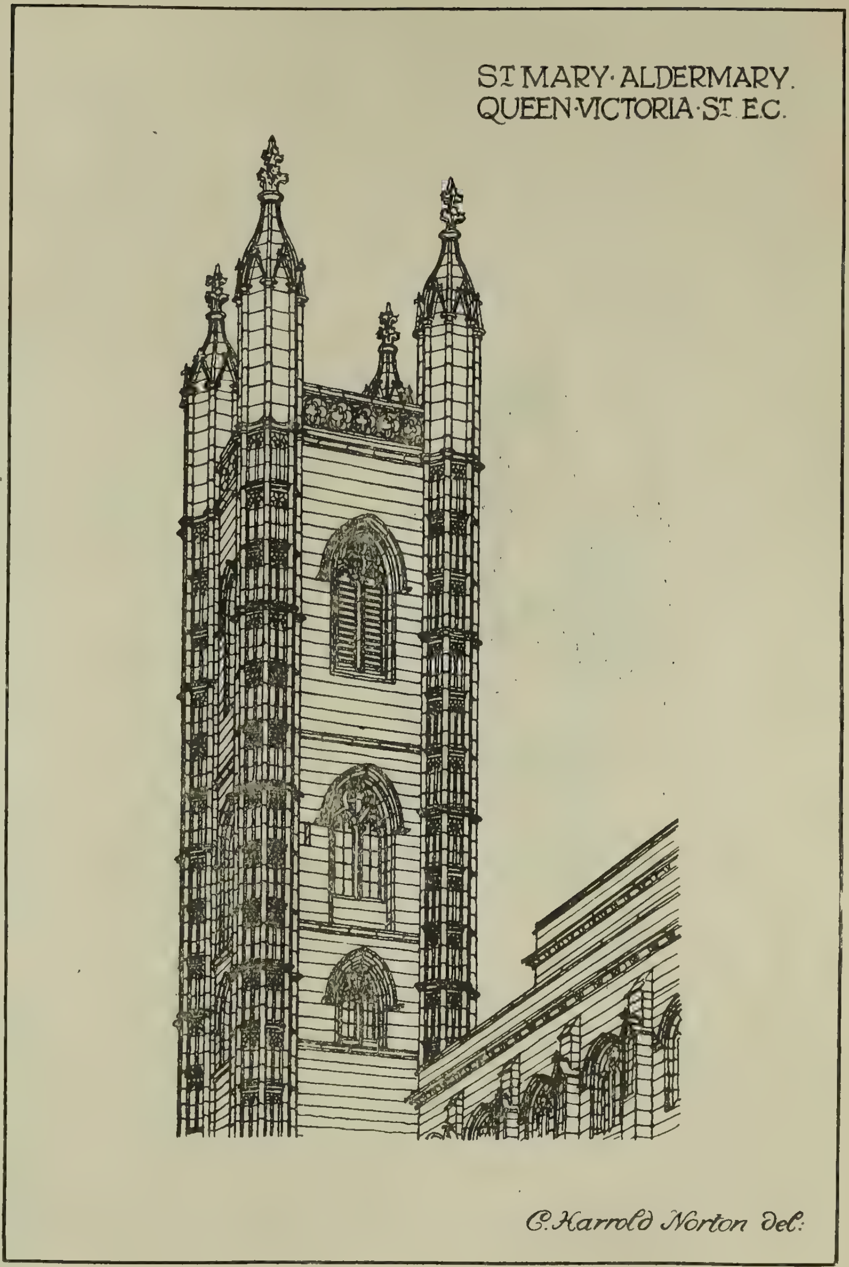
ESIDES the two western towers of West- ter Abbey Wren abandoned a Renaissance ment in three of his churches, completely t. Mary Aldermary, in St. Dunstan-in-the- , and in St. Michael, Cornhill, in respect ne towers of those buildings.

ren's reason for working in a despised has been variously put down to caprice, desire to experiment, and other causes, in the case of St. Mary Aldermary, which rebuilt in 1681–82, a legacy of £5,000 had left by Mr. Henry Rogers for the rebuilding church, and his widow and executrix ented to its being employed on the con- n that the new church should be a copy ne former one. This would amply account he entire church being of a Gothic character. St. Dunstan-in-the-East it seems possible Wren's mechanical and engineering bent interested in the ingenious construc- of the Gothic spires of St. Nicholas, castle, St. Giles, Edinburgh, or King's ge, Old Aberdeen, and determined to n a similar spire. There is also the that he adopted the form of design eference to the wish of his daughter Jane, icturesque if unauthentic legend. This was not completed till 1699, though the of the church, now demolished and replaced he new church built in 1817, was built ty-eight years earlier.

e third "Gothic" design, that of the r of St. Michael, Cornhill, was the last Vren's works, and was designed when he in his ninetieth year, or in the year 1722, after the completion of the church.

we imagine the great architect to have ved the wish of his clients in giving their ch a tower closely resembling that of St. Aldermary, we shall account for the ic character of the three designs without ting an impulse of caprice, which is foreign Vren's character. It is noticeable that oting in the case of St. Mary Aldermary, e he was tied by the testator's wishes, id not follow a Gothic type for the body e church, a further proof that his adoption Gothic type was no mere whim, but was d on him by external circumstances.

the three examples that of St. Dunstan- e-East possesses the greatest charm and est, and it can be well seen from the bottom t. Dunstan's-hill; the detail also is more refined and more feelingly worked out than that of the two other examples. St. Michael, Cornhill, is a more ambitious and larger rendering of St. Mary Aldermary, which it very closely resembles. The church of St. Mary Aldermary is pleasing, though wanting the feeling which is present in true mediæval work; the fan "ceiling" is an interesting variant of the true fifteenth-century work. It has been much restored and Gothicised, buttresses and new woodwork added, so that its value as an example of Wren's work is considerably diminished. The new Church of St. Dunstan-in-the-East is of the poor wire-drawn Gothic of the date 1817; its architect was Mr. David Laing, who built the Customs House, and he was assisted by Mr. (afterwards Sir William) Tite. The design is well proportioned, but would be greatly improved by good stained-glass windows and the removal of the "churchwarden" woodwork. Were that done, it would externally and internally be more complete and harmonious in effect than either of the two other churches. It is much helped by its very picturesque position. Many of the older monuments have been preserved and replaced, and most of them have merit and interest. St. Michael, Cornhill, has suffered the worst that could happen to any church—a restoration in 1858–60. The work of the late Sir Gilbert Scott proves how difficult it is for an architect to rise above the standard of the age in which he lived. It suffices to say


ST MARY·ALDERMARY.
QUEEN·VICTORIA·ST E.C.
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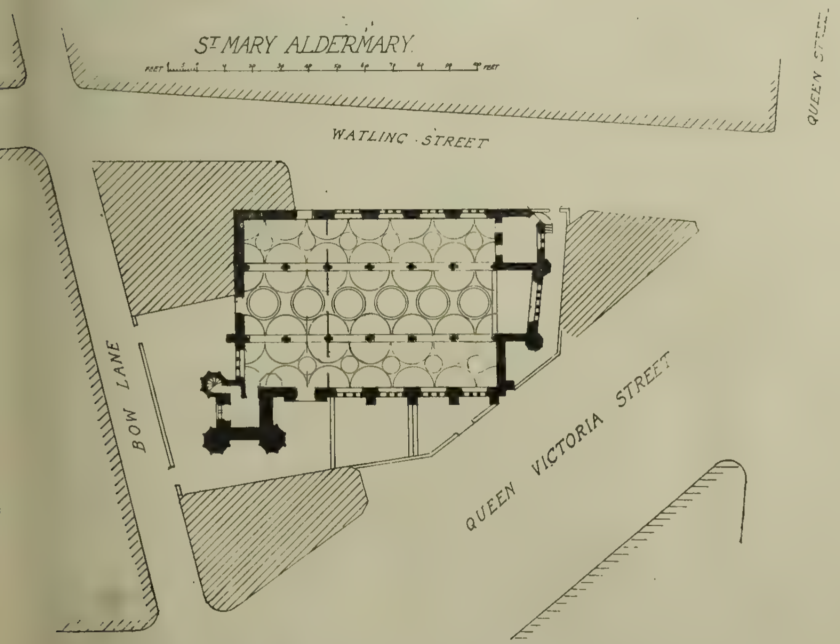

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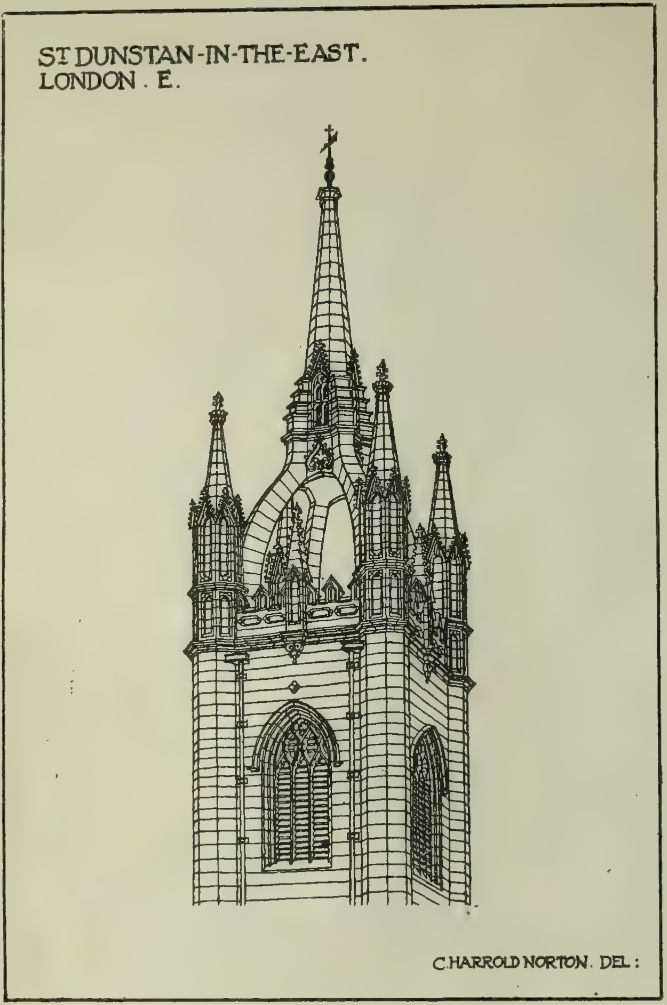
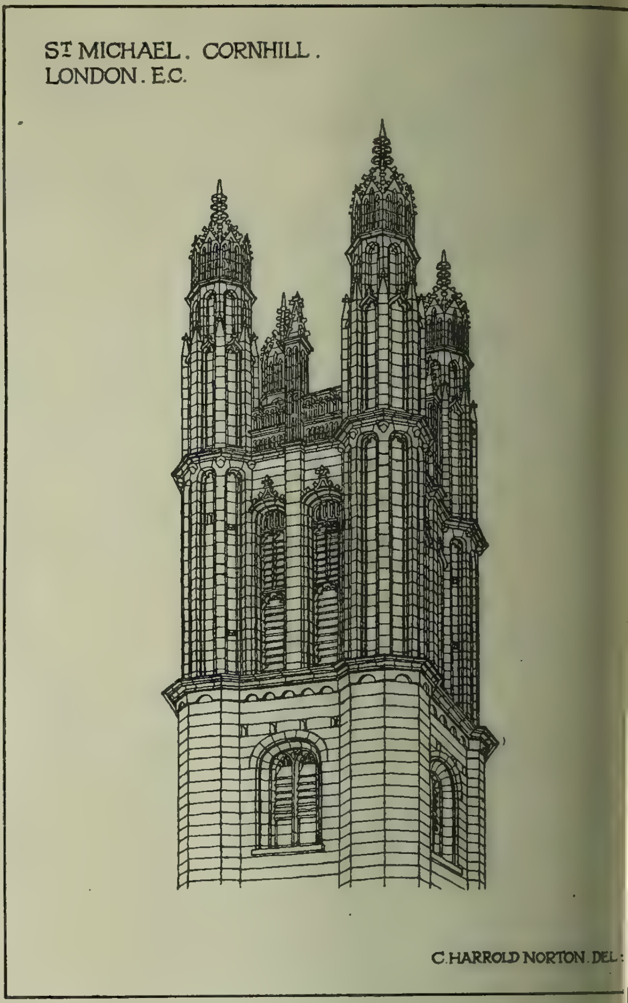
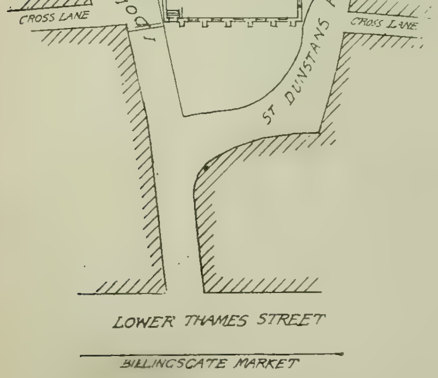




that the interior of the simple Renaissance church is completely spoiled both by colour and the Gothic windows which fill in Wren's window openings; the new porch to the north is pretentious and commonplace, and the cloistered entrance on the south leading from St. Michael's-alley is fortunately already in a state of decay, while Wren's tower stands like a sentinel over the defacement of his work below.



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Wren's "Gothic" differs entirely from that of the early Gothic revival, as no attempt is made to reproduce Gothic mouldings. It may be described as a rendering of Gothic forms by means of the use of free detail. The manner in which in the tower of St. Dunstan's the mouldings are stopped by a bunch of foliage is a striking instance of this freedom, which differentiates it from the work of the Gothic revival.

The patronage of St. Dunstan is in the hands of the Archbishop of Canterbury, that of St. Mary Aldermary rests with the parishioners, to whom it was granted in the reign of Henry VIII., while St. Michael, Cornhill, has since the early years of the sixteenth century been in the gift of the Drapers' Company, who obtained it from the abbot and convent of Evesham. A cloistered court existed to the south of the earlier church built on the site.

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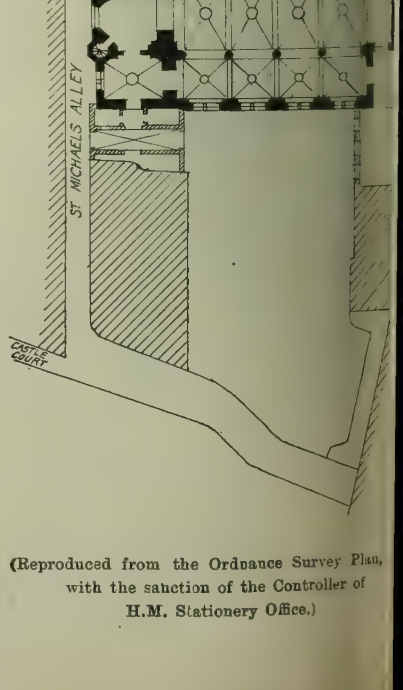
THE MARRIED SOLDIERS AND THE MORATORIUM.

The Council of the Surveyors' Institution have had under consideration the problem of how to meet the difficulty caused by the calling up for service of married men or those with dependents whose liabilities in connection with the occupation of their houses and other fixed charges cannot be met out of the separation or dependents' allowances. In the opinion of the Council the moratorium, which has been proposed in some quarters as a solution of the difficulty, is open to serious objections of a practical nature which render its adoption inadvisable; and they favour instead the acceptance of the burden, subject to proper safeguards, as a national charge. The views of the Council have been embodied in a communication on the subject addressed to the President of the Local Government Board.



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KENSINGTON: PAST AND PRESENT.

ORD CLAUD HAMILTON, M.P., presided on rch 17, at the Royal Society of Arts, over first ordinary meeting of the London iety, when Mr. Alfred Moor-Radford ured on "Kensington: Past and Present." he Chairman said he could only contribute item as regarded the past history of Ken- ton. The house now occupied by Sir Walter llimore was sixty-seven years ago the perty of his grandmother, the Dowager hess of Bedford, and he well remembered boy playing in the garden there, and when looked west there was nothing before him green fields and smiling country.

lr. Moor-Radford said he did not intend to mpt to review all that belonged to Kensing- past and present, but would try and bring re them some of the main features, viz., the t historical buildings and the great names hose who from quite early periods up to the sent had resided there. Kensington was nable as a parish in the hundred of ulston, probably a Danish name of one took to himself a large parcel of land in neighbourhood. At the time of the queror the Manor of Kensington was held the Bishop of Constance, granted to him William I. A few years after it was held ler Bishop Constance by Alberceus de Ver, nd Justiciary of England, and whose cendants gave twenty Earls of Oxford to peerage. In course of time the manor a was divided into the Manors of Notting nes, West Town, and Earl's Court, but in seventeenth century they were acquired after another by Walter Cope, who built self the residence presently styled "Holland use." Kensington was proud to call itself Royal Borough, and thus he would deal t with the Palace, although he thought in e respects "Holland House" deserved rity of notice. Kensington Palace, or, as vas then called, "Nottingham House," was l by the second Earl of Nottingham for ,000 to William III. Sir Christopher Wren about improving and enlarging the palace, l in all £60,000 was spent. To Wren was to be ascribed the garden house known the orangery, which he reared for Queen ne at the northern angle of the palace in 5. With the decease of George III. glory arted from Kensington as far as courts were cerned, but to the present generation the ace was most vividly connected with Queen toria, who was born there in 1819. Behind palace and its gardens, stretching from the h-street to Notting Hill-gate, was Kensing- Palace-gardens, and the second house on west side as one entered the road from the th, No. 2, Palace-green, was the one ckeray built for himself and in which he d. The present Kensington Church was work of Sir Gilbert Scott, who endowed it h a spire, which rose with the cross upon apex to a height of 300 ft. It was said to not only the loftiest spire in London, but be excelled in height only by the spires of isbury and Norwich Cathedrals. Near to the Town Hall, a building of Mr. Robert lker's designing, which was opened in 1880. make way for the Town Hall the old Charity ool, designed by Sir John Vanbrugh, most unfortunately destroyed. Almost oining was the Central Library, a rather int-looking building, which was formerly Old Vestry Hall. A little to the west of rch-street formerly stood "Campden use," now replaced by a row of shops. ongst celebrated houses in Kensington was ore House," which was the abode of the brated Countess of Blessington and the naculate Count d'Orsay. Having referred a number of the many famous men and men who had resided in the borough, the urer described at some length the far-famed Holland House." The founder of the Fox ily was Sir Stephen Fox, one of the origi- ors of Chelsea Hospital, and his youngest son the first of the name to own "Holland use." It was the most beautiful and teliest piece of Jacobean architecture in county of London. It dated from 1607, en it was built by John Thorpe, the creator not a few mansions that had survived to these days in various parts of the country. Henry Fox, who became the first Lord Holland of the new creation after the restoration of Charles II., bought the house in 1767, but it was under the third Lord Holland that "Holland House," which he thoroughly renovated, became the chief *salon* of London. He died in 1840, and on the death of his only son in 1859 the barony became extinct. The position of "Holland House," surrounded with terraces, lawns, parks, groves, and walks, the latter left to the wildness of country lanes, was unique in any capital, and it was a phenomenon of London life that within hail of the sounds of a busy thoroughfare the visitor once inside the gates of "Holland House" was transported into the midst of all those sylvan attractions associated with an ancestral and extensive country seat. In 1820 Notting Hill-gate was a farm, and a few years later Ladbroke-grove was the centre of an immense racecourse, known as the Hippodrome. Touching on the squares, the lecturer exhibited views of Kensington-square, once the most fashionable spot in London. Here in 1692 lived the Duchess of Mazarin, niece of the great Cardinal; whilst in 1830–35 Prince de Talleyrand resided at No. 36. In Edwardes-square lived Leigh Hunt. Cromwell-road was said to have been called after the Protector, who was reputed to have once occupied "Shale House." "Scarsdale House" formerly stood in Wright's lane, and parts of it were now incorporated in the premises of Messrs. Ponting. The great educational centres in the Royal Borough, museum land, and the residential district known as South Kensington were the creation of the second half of the nineteenth century, and the outcome of the great Exhibition in 1851. The surplus from the Exhibition was invested in the purchase of undeveloped land in the neighbourhood of the site, and the original proposal of the Prince Consort was that the National Gallery and the Royal Academy and similar institutions should be transplanted to the regions now called South Kensington, and to them should be added a great museum of art and another of science. The scheme had not been carried out in its entirety, but they had the University of London, the Imperial College of Science, the Imperial Institute, the new Victoria and Albert Museum, the Imperial College of Science and Technology, the Royal School of Science, the Royal School of Mines, and the Central Technical College of the City and Guilds of London Institute. There was further the Royal College of Music, and quite recently the Royal Geographical Society had removed to Lowther Lodge. Might not this be the forerunner of many other learned societies locating themselves in the borough, and where could a better site be found than in a portion of the grounds attached to "Holland House," provided that the owners would agree to some of the land being sold for such a purpose? This would indeed be a worthy object for so delightful a resort, and he could imagine colleges arising, probably to be named Victoria, Albert, King Edward VII., Gresham, King's, St. Paul's, and City of London, to rival even those magnificent colleges of learning at Oxford and Cambridge. Surely a magnificent imperial city such as London warranted a finer site for a university than Central London.

The Chairman said they were taking a more sentimental interest in their surroundings than they had done in the past, which led to a healthy municipal feeling.

Mr. E. T. Hall said that the London Society was to be congratulated on getting men like Mr. Moor-Radford, who took such interest in the localities in which they resided, to give lectures. It was by such means that they would get the people of London to take an intelligent, patriotic, and live interest in the places where they dwelt. They were all proud of their great metropolis, but they were more inclined to look upon it as the hub of the universe, whereas in order that it might be beautiful and worthy of the Empire they wanted to foster the feeling which Mr. Moor-Radford had shown that evening.

Mr. Moor-Radford, in reply to a vote of thanks, said what he had done was out of pure love for Kensington. But London teemed with historical buildings.

CORRESPONDENCE.

Wren's Churches.

SIR,—My attention has been drawn to the letter in your journal of February 4 from Mr. L. Latham, who suggests a simple and practical procedure for forming the nucleus of a Wren Museum. It is clear that no scheme involving expenditure for such a purpose would, or ought to, have a chance of success at the present time; but the proposal to collect and arrange existing material is excellent, and should have the strong support of British architects.

To Wren, even more than to his great forerunner, Inigo Jones, we owe, for good or for bad, whatever is distinctively national in our rendering of the architecture of the Renaissance, and the influence of his work penetrates every line of our designers since his time, notwithstanding their individuality or affected "style." It is desirable that opportunity and place should be given for the comparative study of his buildings, whether at the London Museum or the Guildhall; and they should be represented by a complete series of models, if possible to a common scale. "If the whole art of building were lost," said Evelyn, "it might be recovered and found again in St. Paul's, the historical Pillar, and those other Monuments of his happy Talent and extraordinary Genius."

JOHN W. SIMPSON.

The Volunteer Corps.

SIR,—Now that the Volunteer Corps have secured recognition by the War Office, it is most necessary that their ranks should be augmented as much as possible in order that they may efficiently fill the place which will be assigned to them. I appeal, therefore, through the hospitality of your columns to every active man not at present in the fighting forces of the Crown to join one of the Volunteer Corps for the purpose of assisting in home defence and relieving other forces now stationed in England.

Appeal is specially made to (1) men who have been accepted for clerical work and have been put back; (2) men over or under military age; (3) those who may have dropped out at a time when it seemed recognition might be withheld; and (4) men rejected for slight physical defects.

From personal experience I can assure the older men that no demands will be made upon them that are not within their powers and that do not make them better men physically and mentally. Lord Roberts often told us that it is the duty of every fit man to learn to shoot and become efficient in drill, and this can be done in a comparatively short time without interference with business and other duties.

Our battalion offers excellent facilities for London men, the headquarters being within a few yards of Victoria Station. We have a fine drill hall, lecture-room, common-room, with canteen, rifle range, armoury, etc. In addition to the usual infantry training we offer physical drill, musketry, school of arms, lectures, and practical instruction in field engineering, entrenching, bridging, etc. The battalion is now engaged at week-ends upon the entrenchments in connection with the defence of London. Week-end camps are being held and a battalion camp has been arranged for Easter on the North Downs near the trenches.

The Battalion Sergt.-Major is at headquarters every day for the purpose of receiving recruits.

EDWD. GREENOP,
Hon. Secretary, 4th Battalion Central
London Regiment Volunteers.

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A DECEASED ARCHITECT'S ESTATE.

The late Mr. John Walton Taylor, of Whiteknights, Castle Leazes, Newcastle-on-Tyne, architect and surveyor, has left estate to the gross value of £21,914.

ST. BARTHOLOMEW-THE-GREAT, WEST SMITHFIELD, E.C.

The history and architecture of this monastic church will be explained to visitors on Saturday, March 25. An organ recital will be given at two o'clock. All parts of the church will be opened to inspection free of charge, but a collection will be made for the Restoration Fund.

GENERAL NEWS.

The Royal Academy Exhibition.

To-day (Friday) has been fixed as the date for sending in architectural drawings, etc., to the Royal Academy.

Memorial to Nurse Cavell, Peterborough.

Mr. Temple Moore, F.R.I.B.A., has visited Peterborough Cathedral in connection with the proposed memorial to Nurse Cavell, who was at one time a pupil of a school in the Minster Precincts. He was met by the Dean and Bishop Clayton, and it was decided that the memorial should take the form of a profile medallion of Nurse Cavell on a tablet to be affixed to the sixth pier from the west front on south side of the nave.

Roman Bust, Devizes.

A fine bust of Romano-British workmanship has recently been added to the Devizes Museum's collection. Mr. R. J. Shackle, of Trinity College, Cambridge, had his attention called to the work early in 1912 by a friend, who was the first to perceive its Roman origin. Only a few weeks afterwards the same identification was made independently by Capt. B. H. Cunnington, of Devizes. Mr. Shackle has further submitted photographs to Messrs. H. B. Walters, of the British Museum, and A. B. Cook, of Queens' College, Cambridge, who agree in considering the work a genuine relic of antiquity. When first noticed the bust stood in Macklin's-court, Marlborough; unfortunately it has not been possible to trace its original provenance.

Trade with Spain after the War.

According to information furnished by H.M. Consul at Bilbao (Mr. A. M. Madden, C.M.G.) local business men anticipate that after the war there will be a rush of Germans to Spain intent on doing business in and trading with that country. Before the war Spain was flooded with cheap German goods, and it is reported that 75 per cent. of the machinery, tools, electrical fittings, etc., in use in Bilbao is of German manufacture. Many of these goods are highly finished, but very poor in quality; nevertheless, they are preferred by the Spanish purchaser on account of their cheapness. The present is, however, considered a good moment for introducing United Kingdom manufactures. H.M. Consul therefore suggests to United Kingdom firms, if they wish to preserve their position in Spain, they should consolidate their connections and *clientèle* so as to be able to compete against the expected German business effort. He adds that large numbers of Germans are now in Spain employed in obtaining information on every kind of subject, and no doubt the point of view of future trade is being carefully studied by them.

Exhibition of German Catalogues in London.

In order that British manufacturers may have an opportunity of familiarising themselves with German methods of publicity the Board of Trade have collected over 3,000 specimen catalogues of German origin, and these may be inspected at the Foreign Samples Section of the Commercial Intelligence Branch, 32, Cheapside, London, E.C. The collection, which is illustrative of a great variety of industries, includes 887 catalogues of machinery. One feature of the catalogues which is of especial interest to British manufacturers who are themselves publishing catalogues with a view to increasing their export trade is the number of foreign languages in which the German catalogues are printed. Many are polyglot in character, and are printed in three, four, and in some cases five different languages. A complete index has been prepared, in which the catalogues are classified both as regards articles of manufacture and names of manufacturers, thus rendering identification of any particular catalogue a simple matter. Copies of the index may be obtained by United Kingdom manufacturers on application to the Director, Commercial Intelligence Branch of the Board of Trade (Foreign Samples Section), 32, Cheapside, London, E.C. Arrangements have been made whereby catalogues may be lent for a few days to United Kingdom firms established in the provinces.

Bust of Sir Archibald Geikie.

A bust of Sir Archibald Geikie was unveiled recently by Sir William E. Garforth on the main floor of the Museum of Practical Geology, in Jermyn-street, with which Sir Archibald was connected for many years in the capacity of Director. The bust has been executed by Professor E. Lanteri, of the Board of Education.

New Associates, Royal Scottish Academy.

At a General Assembly of the Royal Scottish Academy three new painter Associates and one architect Associate were elected. Those gentlemen who were successful in the voting were:—Painters, Mr. Henry Lintott, Edinburgh; Mr. David Alison, Edinburgh; Mr. Archibald Kay, Callander; architect, Mr. James A Morris, Savoy Croft, Ayr.

London Topography in Stained Glass.

A meeting of the Society of Antiquaries was held on the 16th inst., when Dr. William Martin read a paper on the "Topography of London as revealed in the Stained Glass of Lincoln's Inn Chapel." He said that in one of the windows of the south side there was a remarkable series of diminutive views of London, the original sketches of which were unknown, but it was evident that the stained-glass artist worked from faithful pictures then extant. These stained-glass pictures compared very favourably with the Elizabethan and Jacobean panoramic views of London, and it was remarkable that London topographers had not gone to the Lincoln's Inn windows to check conclusions they had drawn from other sources.

Proposed Association of Master Painters and Allied Trades.

A meeting will be held on Thursday next, March 30, at 7.45, at Limes Hall, Limes-grove, High-street, Lewisham, and another on the following day, Friday, March 31, at the same time, at Croydon Public Hall, George-street, Croydon, with the object of forming local associations of master painters, decorators, and kindred trades for the districts of Lewisham, Deptford, Greenwich, Catford, Forest Hill, Ladywell, Hither Green, Lee, Blackheath, Brockley, and New Cross, and also the districts of Croydon, Thornton Heath, Waddon, Sutton, Carshalton, Hackbridge, Wallington, Beddington, Purley, Addiscombe, etc. Every employing painter, builder, etc., is asked to attend. The speakers will include several representatives of the National Association of Master House Painters and Decorators, and others representing the London Association of Master Decorators. Tickets of admission may be obtained from Mr. Arthur S. Jennings, Editor of the *Decorator*, 365, Birkbeck Bank-chambers, High Holborn, London, W.C.

Chadwick Public Lectures, 1916.

A course of three Chadwick lectures on "The Domestic Arterial System in Relation to Comfort and Health," by Dr. Charles Porter, Medical Officer of Health, St. Marylebone, is being delivered at the Household and Social Science Department, King's College for Women, Campden Hill-road, Kensington, W., on Wednesdays at 3 p.m. The first lecture, on "Drains and Drainage," was delivered on the 15th inst. A special interest attaches to this course of lectures, inasmuch as the subject was chosen upon the suggestion of Miss Chadwick, daughter of the founder of the Trust, the design of the course being to instruct women householders, matrons of hospitals, and women heads of institutions in the regulation and management of the many pipes, wires, and other mechanisms which form the complicated arterial system of every modern residence. This course is also the first to be given at the new Household Social Science Department of King's College for Women. In the course of his lecture Dr. Porter said, though in every way possible the various apparatus were made self-cleansing, it was necessary that they should be looked after and examined from time to time. In all of them there were weak points which he indicated. He advised regular and routine examinations on the part of the householder. A large number of slides illustrating the construction of a drainage system were shown, and hints given as to the best type of apparatus to choose for various purposes in relation to drainage.

A Promotion.

Lieutenant Richard Twelvetrees has be gazetted to a captaincy dating fr February 1 last. Captain Twelvetrees attached to the headquarters staff of British Expeditionary Force in the capac of Inspecting Officer of the Army Service Co Mechanical Transport.

Scott Memorial in St. Paul's.

The Prime Minister will unveil, after East the bronze memorial tablet in St. Pa Cathedral to Capt. Scott and his companic in the Antarctic. The sculptor is Mr. Nicholson Babb, and the tablet, which has bo provided by public subscription, bears inscription by Lord Curzon.

A Raemaekers Poster.

M. Louis Raemaekers, the famous Dut cartoonist, has drawn for the Natio Committee for Relief in Belgium one of remarkable "War Posters." A Belgi woman, with a ragged red cloak over shoulders, is holding tightly to her breast infant in a shawl. Around the child is clasp the mother's hand—a hand which sp starvation. The poster, which is artistica reproduced, has this laconic heading, " Belgium." Underneath appears the one wo "Help." Any of our readers can secure copy of the poster free of cost by sending postcard to the Hon. Secretary, Natio Committee for Relief in Belgium, Trafalg Buildings, Trafalgar-square, London.

Church Building Society.

The Incorporated Church Building Socie held its usual monthly meeting on the 1t inst. at the Society's House, 7, Dean's-ya Westminster Abbey, S.W., Lieut.-Colonel t Hon. G. H. W. Windsor-Clive in the cha Grants of money were made towards buildi new churches at Goodmayes, St. Paul, Ess £150; and Scotswood, St. Margaret, ne Newcastle-on-Tyne, £130. Grants were a made towards enlarging the Church of Hilda, Ravenscar, Yorks, £20; and repairi Wigginton, St. Giles, Oxon, £10. The followi grants were also paid for works completed: Cwmbran, St. Gabriel, Mon, £175; Belmo St. John the Baptist, Surrey, £130; Anwi St. Edith, Lincs, £25; and Southend, Erkenwald, £30. In addition to this the su of £96 was paid towards the repairs of elev churches from Trust Funds held by the Societ

The Timber Difficulty and the Forests of Russ

Mr. E. P. Stebbing, head of the Departme of Forestry, University of Edinburgh, gave lecture last week on "Forestry and the Wa at the Royal Society of Arts, London. T war, he said, had found this country tota unprepared as far as its timber supply w concerned. Building on a stupendous sca would require to be undertaken after the wa and the question arose where the timber requir for this new construction was to come fro His proposition was that the Allies should co to a definite understanding now, and pla themselves in a position to control the Europe timber market at the end of the war; to exerci in effect a State control over prices for a ti as the only effective means to cope with t enormous demand which would exist, and prevent the formation of timber "rings either by the Central Powers or others. It w desirable that they should have accessib supplies in large quantities and owned by t Allies, and that there should be an agre ment that these should be made availab at the earliest possible moment, with the obje of bringing down the present prepostero rates. There was a gigantic forest area Russia, which would fulfil the objects require Russia in Europe had an area of 447,500,0 acres of forests; Finland had 62,800,000 acre and Siberia and Turkestan the gigantic tot of 853,000,000 acres. His suggestion was th Russia be asked to institute fellings on a lar scale, and to get the work set agoing at hi pressure as soon as possible. Whatever t sum necessary, it would be money well laid ou All that was required was a practical worki scheme. This country could lease for a peri of years and work a large area or sever areas of the Russian forests. He urged, to that as soon as possible trees be planted in o own country to meet our requirements.

LAW REPORT.

OFFICIAL REFEREE'S COURT.

(Before Mr. VEREY.)

Hawkins v. Farnfield.

his action, which raised an unusual point the finality of an arbitrator's award lation to dilapidations, Mr. Edward ins, Mr. Alfred T. Hawkins, and Mr. Barkett, the owners of 19, Longlands- Sidcup, Kent, known as Sidcup College, to recover damages for breach of ing covenants of a lease from the de- nts, Mr. Samuel Farnfield, of Sidcup Sidcup Green, and Mr. Algernon Samuel eld, of Barming Asylum, Barming, Kent.

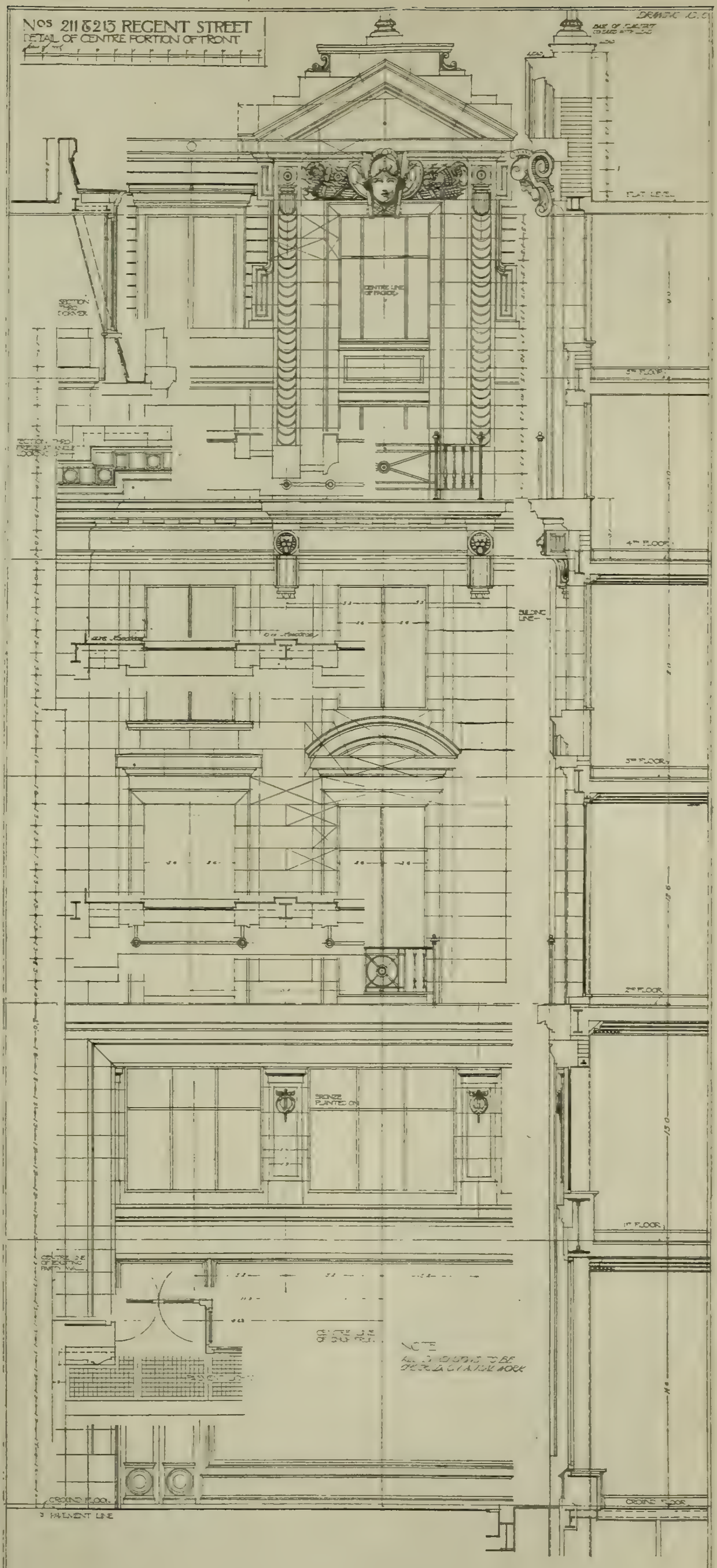
n counsel's opening statement it ap- d that the defendants were the assignees ease granted in 1901 by the trustees of operty to a Mr. John Sandercock for a of twenty-one years, and that lease was ed to the defendants in the following and they remained in possession down to mmer of last year. The premises were s a boys' school, and prior to the year ey had got into a bad state of repair. endeavouring to get them put in order intiffs had a survey made in 1913 under se in the lease which gave them power er and inspect. A notice was served he defendants, and under it some repairs lone, but very little, and the result was n August 12, 1913, a writ was served ng damages for breach of covenant. The ad a clause in it enabling the defendants e notice to terminate at the end of seven rteen years, and at the latter period such was given, which enabled them to leave 5. The proceedings against them for lations were set down for trial at the Assizes at Maidstone, but before the case on an agreement was come to, under judgment was to be signed in plaintiffs' , subject to an agreed sum for costs. was nearly twelve months after the writ sued. Part of the terms of the agree- was that the defendants should carry out of the works specified in the notice, and ny dispute should be submitted to arbi- . Disputes did arise as to liability, and atter went before an arbitrator, who in of last year awarded plaintiffs £92 in of the matters submitted to him. The erminated in accordance with the notice e of last year, and when the defendants out they had spent nothing on repairs a small sum spent after the notice was , the place being left in a dilapidated on. The plaintiffs instructed a surveyor new the premises to go over them and a survey, with explicit instructions not ude in this schedule any of the items which Mr. Flint, the arbitrator, had ted. The defendants denied that there een any breaches between the date of ward and the time the action was t, and said that the plaintiffs were suing at which they had recovered under the The lease having terminated, at de- ts' option, at the end of the fourteenth they were, contended counsel, bound to the outside at the end of that year, as s the inside, whatever might have been before. The clause in the lease which with the state of things at the termina- f the lease was not, he said, before the tor. The arbitrator's award of £92 was ect of the state of the premises before estion of the determination arose. The ment had now taken over the premises unition works, but the plaintiffs were d to claim £40 for the loss of a quarter's s the repairs would have taken a month y out.

Hamilton Hall Turner, surveyor, of vay, Westminster, gave evidence in sup- the plaintiffs' claim, estimating the cost airs at £246.

Referee, after hearing further evidence, for the plaintiffs, awarding them £240 ect of the dilapidation and £40 for loss .

MEMORIAL TO SIR EDWARD HULSE.

marble tablet erected by citizens of ry in memory of Capt. Sir Edward Scots Guards, who was killed at Neuve le, was unveiled at Salisbury Cathedral eek. Beneath the inscription is the and motto of the Scots Guards within a of bays. The tablet is the work of Mr. kman, of Camden-square.



Nos. 211 & 213, Regent-Street, W.

Mr. Henry Tanner, F.R.I.B.A., Architect. (*See page* 234.)

Leading Contents.

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ILLUSTRATIONS.

The Work of Alfred Stevens.

In mentioning in our issue of March 10 the admirable lecture given by Mr. MacColl, LL.D., on the work and life of Alfred Stevens, illustrated by slides taken from this artist's original drawings, we were able to promise our readers in a later number reproductions of two of these drawings.

We can now in our present issue fulfil this promise, and thus assist in calling attention to the work of a genius in art whose merits are only now beginning to be more fully recognised.

Alfred Stevens was born about 1818 into a period which, compared with the late eighteenth century or even the late nineteenth, might be called one of artistic stagnation; and the width and universality of his genius were not appreciated by his contemporaries. He was clear of academic training, and his studies were direct from the frescoes, the sculpture, and canvases of the great Italians during a fruitful visit of nine years to Italy.

At Florence he was studying Spinello, the Arctine, and Giotto, at Venice (1839) Titian, at Rome the great Michelangelo, while he was working at the same time in that city for the sculptor Thorwaldsen. In these studies he drew in from these great masters of their time the very spirit of the Renaissance; he allowed his sympathies "to expand over all forms of art."

And that was what his contemporaries could not understand. Coming back to England (1842) he was absolutely penniless, and, though he obtained a professorship of design three years later, he was glad to take the post of chief designer of bronze and metal work to Messrs. Hoole, Robson, & Hoole, of Sheffield, who manufactured stoves, firedogs, and grates from his design. But to whatever he touched he gave something of his creative power. His red-chalk figure studies recall those of the great Italians in their freshness and force. But it is really as a sculptor that Stevens is best remembered, and in this connection his name must always be associated with the Wellington Memorial in St. Paul's Cathedral, to which Mr. MacColl alluded at some detail in his lecture, and pointed out that in the competition his design only gained the sixth place, and was accepted finally because of its better adaptation to the position to be filled.

In another age he might have been earlier recognised and have given an impulse to British sculpture which it badly needed; to our age it is left to appreciate his genius, to admire its diversity, and to study its lessons.

Bath Improvement Scheme.

We give further illustrations of this excellent and practical scheme. In some towns architectural improvements may be described by the sternly practical as luxuries, though we do not so regard them. In the case of Bath they are an addition to its working capital, and the more urgent the need for economy after the war the more it becomes necessary to increase dividends, municipal and otherwise. We therefore consider a scheme of this nature in the same category as an addition to the manufacturing plant of a great commercial business or factory.

We give as an extra inset another reproduction of a drawing of Mr. Atkinson's scheme, which we illustrated a fortnight ago. In consequence of some unusual difficulty some of the reproductions of this plate were not altogether satisfactory.

Nos. 211 and 213, Regent-Street, W.

These premises were erected from the designs of Messrs. Henry Tanner for Messrs. J. Lyons & Co., Ltd., and the work was carried out by their own building department. The front is in Portland stone, and the design forms the centre feature of the proposed new block, extending from Conduit-street to Maddox-street.

The building was originally intended to provide two shops to Regent-street, hence the setting out of the steelwork, but Messrs. Lyons decided later to occupy the whole of the premises themselves. The accommodation consists of commodious refreshment-rooms on the basement, ground, first, and second floors, with ladies' toilet-rooms, etc., on the third floor and kitchens above.

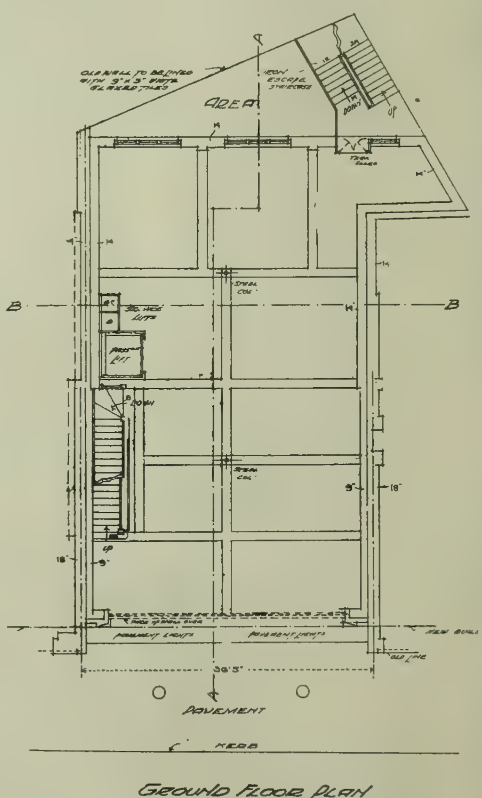
The shop front was carried out by Messrs. H. W. Cashmore & Co., and Mr. J. A. Stevenson was responsible for the stone carving.

The list of sub-contractors was as follows:—

Portland stone—Messrs. W. Tomes.
Constructional steelwork—Messrs. Redpath, Brown, & Co., Ltd.
Iron escape staircases—Messrs. H. & C. Davis, Ltd.
External ironwork—The Albany Forge, Ltd.
Lift—Messrs. Waygood-Otis, Ltd.
Mosaic work—Messrs. Fenning.
Fibrous plaster—Messrs. Marshall & Co.

Wren's Churches.

We give further reproductions of some excellent photographs by Mr. George Trotman of the Churches of St. Augustin with St. Faith, St. Michael's, Cornhill, St. Dunstan-in-the-East, and St. Edmund King and Martyr.



Nos. 211 & 213, Regent-Street, W.

Mr. Henry Tanner, F.R.I.B.A., Architect.

MEETINGS.

Friday, March 24.

Glasgow Royal Technical College.—Busi meeting. 7.45 p.m.

Monday, March 27.

Royal Society of Arts.—Mr. Edward A. R on "Surveying." 4.30 p.m.

University Extension Lecture (at the Vi and Albert Museum).—Mr. Banister Fletch "Georgian Public Buildings." 4.30 p.m

Tuesday, March 28.

Royal Sanitary Institute.—Discussion "Made-down and Tenemented Houses" t opened by Mr. G. M. Pettit. 4.15 p.m.

Wednesday, March 29.

Northern Architectural Association.—A general meeting. 4.30 p.m.

Carpenters' Company.—Sir Krishna G. on "Indian Building, Ancient and Mod 7.45 p.m.

Thursday, March 30.

University Extension Lecture (at the B Museum).—Mr. Banister Fletcher on Mark's, Venice." 4.30 p.m.

◆

OBITUARY.

Mr. H. W. D. Theobald.

We much regret to record the death o Henry Wells Dewhurst Theobald, a known surveyor. Born in 1844, he became a pupil and assistant in the fir Messrs. Gardiner & Bell, quantity surveyo 110, Gt. Russell-street, and upon Mr. retirement he was taken into partnership b Gardiner. In time Mr. Theobald succeed head of the firm, and for many years carried large practice under the title of Messrs. Gar Son, & Theobald, and subsequently Messrs. diner & Theobald. The last twenty years h assisted by his son, Mr. J. M. Theobald, will continue the practice. During Theobald's career he was engaged in a number of important buildings, including erected by H.M. Office of Works. He elected a Fellow of the Surveyors' Instit in 1883. His courtesy, integrity, and tho knowledge of his work led to his being frequ asked to act as arbitrator in building dis The many architects with whom he necessarily much in contact will, we are testify to his ability and attention to interests of their clients. On the other he was not unmindful of the rights o builder, particularly in complicated que of account, where he was practically the ar Mr. Theobald was well known for w within his estimates.

The writer of these notes, who had k him for upwards of fifty years, mourns hin friend and a most careful and reliable ad Mr. Theobald died at his residence, "H House," Spring-grove, Isleworth, on the 9t after a short illness.

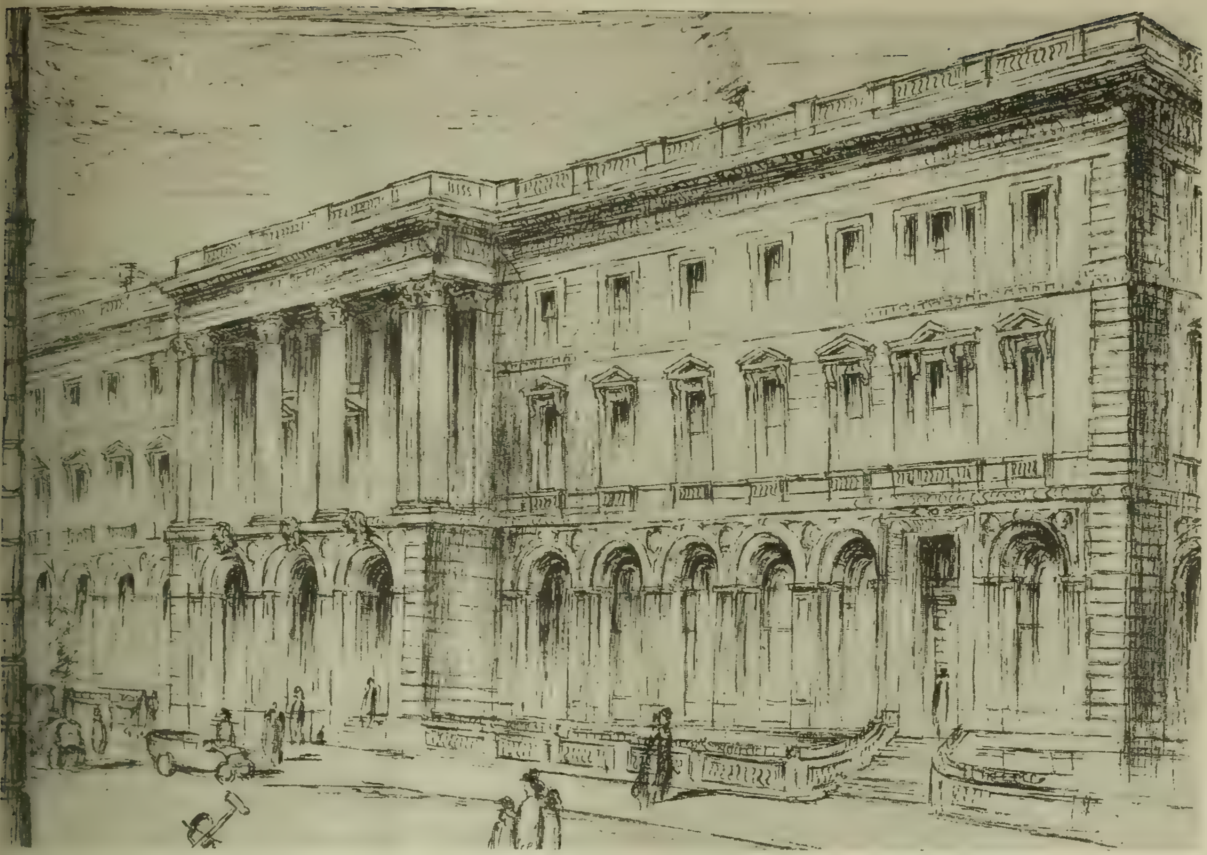
◆

FIFTY YEARS AGO.

Designs for Sunderland.

The civic Solons, in the Sunderland Council, have hit upon a novel pla obtaining designs and estimates for new Town Hall. What think you? are to communicate with the different porate authorities in the kingdom fo purpose of being supplied with copi their plans and the cost of erection, then to select from amongst them the answerable. The architectural profe may well tremble at such an innov *Sans* Sunderland—*sans* everything.

[*** From the *Builder* of Marc 1866.—Ed.]



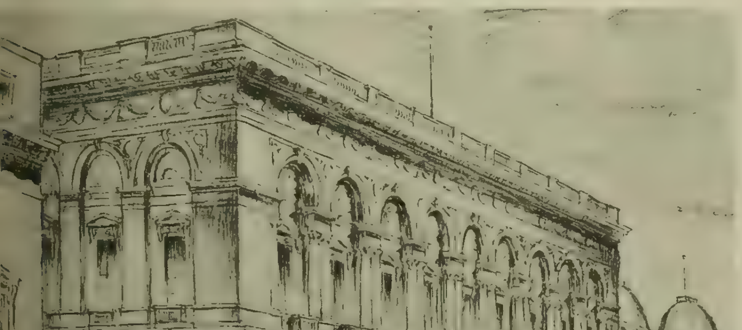
The General Post Office.

SOME MANCHESTER SKETCHES.

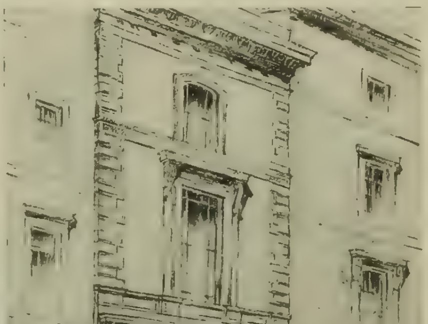
E accompanying sketches are by Mr. on Hemm, who has sent us the ing notes :—

General Post Office was erected as ly as 1884 from the drawings of the ames Williams, some time architect to ffice of Works. The design of the Office is consistent in all four eleva- the accessory details are carried out spirited regard for the dignity of the building, and moreover the character rect. The elevation to Spring-gardens ndiose (see sketch). This front, with its excellent detail and refined treatment of masonry, should be studied by students with a reverence akin to that usually bestowed on buildings belonging to a more remote period. The elevation to Brown-street is broad, simple, and unaffected.

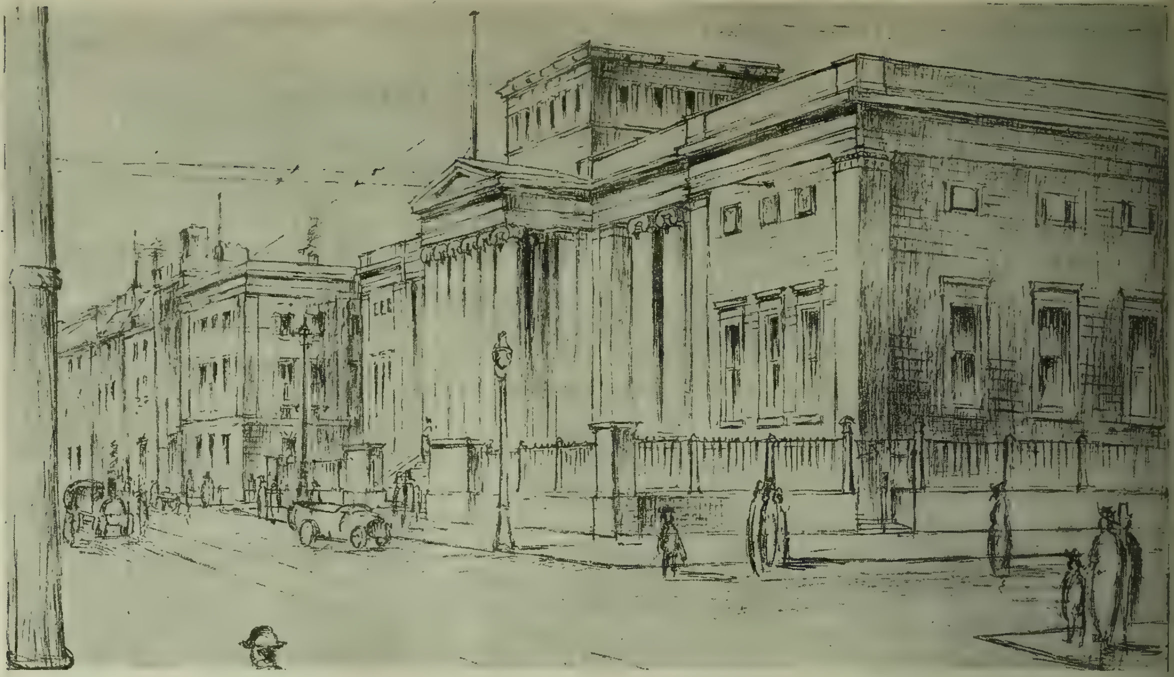
Edward Walters, the architect of the Free Trade Hall, was the son of John Walters. When only thirteen years of age he entered the office of his father's assistant, Isaac Clarke. Later, he assisted Lewis Vulliamy, and eventually Mr. (afterwards Sir) John Rennie, by whom he was sent to Constantinople to act as architect to the small arms factory which Rennie built for the Sultan of Turkey in the 'thirties. Walters came to Manchester just at the time when the well-known architect, Lane, was retiring from practice, and had the support of such an influential patron as Cobden. Walters inherited from his father an instinct for dignified architecture, and this led him to follow the Pallazzo model, which Barry had previously introduced with such success for his clubs in Pall Mall. One of his most important works was a warehouse in



The Free Trade Hall.



Messrs. Armitage & Wolff's Premises.



The Art Gallery.

Portland-street, Manchester. At that time there arose a speculative mania for erecting large warehouses, and Walters had the ability to see that such utilitarian structures were capable of being ennobled by the attributes of art; in particular, he recognised that there was an opportunity for breadth and repose. In 1853 came the opportunity that Walters needed to demonstrate his ability to undertake work of the first order—namely, the Free Trade Hall. It was opened in 1819. The façade is 159 ft. long in Peter-street and 75 ft. high.

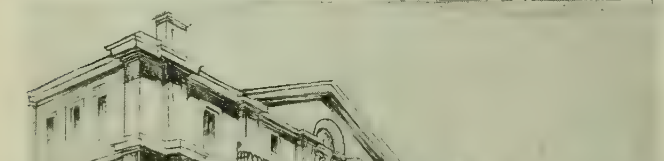
Following this notable achievement came the commission for the Manchester and Salford Bank in Mosley-street. The design of this building is masterly in every regard, the gigantic doorway connecting the two blocks in Mosley-street, forming a monumental composition which is unequalled in the North of England. Walters retired from practice in 1865, dying at Brighton on June 22, 1872.

Sir Charles Barry, the architect of the Manchester Art Gallery, was born in 1795. After spending six years with Middleton and Bailey, he determined to study abroad, and, taking advantage of a small legacy left to him by his father, he started in 1817 on his foreign travels, visiting principally France, Germany, Italy, Greece, Turkey, and Egypt. He returned to England in 1822, and commenced practice. One of his chief works was the Travellers' Club, Pall Mall, erected in 1829, which marked a new departure in Classic design, and, besides being one of the earliest, is undoubtedly the best of Barry's buildings. The Manchester Art Gallery, the Travellers' Club, and the Reform, London, some of his earliest works, are simple both in conception and handling; but his later designs are the reverse, being devoid of restraint as well as complex in the composition of the minor parts. Barry, at the height of his fame, led the Italian school, and had many followers and imitators; his chief pupils were his two sons, Robert Banks, J. Somers Clarke, and John Gibson.

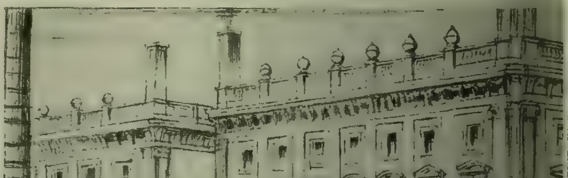
Professor Charles Robert Cockerell, R.A., was born in 1788. In 1810 he started on a long travelling tour. He returned to England after about seven years' absence. His immense knowledge of Classic art was drawn direct from the fountain-hea
inspiration. Like Sir C. Wren, Coc
began the practice of architecture som
late in life, although he had a far g
knowledge of form than had the f
master. At the age of twenty-nin
brought from abroad a great reputati
a scholar, which gained for him many f
and clients.

One of his earliest works was the Li
Institution at Bristol. He des
numerous banks in different parts o
country, including the branches of the
of England at Manchester (see sk
Plymouth, and Bristol in 1844, the s
branch at Liverpool in 1845. In
Cockerell won the competition for the g
at Oxford known as the Taylor and Ran
Buildings—the largest of his works—
he completed in 1845. He des
numerous other buildings too well kno
mention. All Cockerell's later works
of such importance that it is difficu
give preference to any particular build
being his masterpiece. The great arc
died in 1863 and was buried in St.
Cathedral.

GORDON HE



Bank of England.



William Deacon's Bank, Mosley-Street.

THE BUILDING TRADE.

ILITY FOR DANGERS EATED ON HIGHWAYS.

ur issue for November 19 last we dealt ith the liability of builders towards those ho come upon the premises where build- ations are being carried on, and in the f that article we mentioned the obligation create any danger adjoining a road h the public had access. In building ns it is sometimes necessary, however, eave from the road authority, to open carry out some work on the highway nd therefore we may in this connection a recent case, Crane *v.* South Suburban npany (1916, 1 K. B. 33), as showing the y of taking every precaution where such ns are being carried out. The Gas y in this case were acting under y powers, so their position was stronger ould be that of a private individual, refore the case is the more instructive.

course of repairing a gas main the nts' workmen placed a fire-pail on the d forecourt of a house to which the had access, a few feet from a public , and on the fire was a ladle containing lead. Some children were playing y, and the workmen had previously m to keep away from the fire. A boy by accidentally knocked over the fire- d some of the molten lead was spilled foot of one of the children, the plaintiff action. The case came before a al Court on appeal from the County udge, who had awarded the plaintiff £25 s. At the time of the accident all the re working in the trench in the road, fire was unattended. The defendants hree contentions by way of defence :— t there was no duty upon them except reate a hidden danger in the nature of a 2) that there was no evidence of any ce or breach of duty on their part; that even if there were a breach of duty not the cause of the accident, the real eing the intervention of a third party, .

Divisional Court upheld the finding of nty Court judge, holding that the point trap had nothing to do with a wrongful mitted on a highway or on land adjacent which the public have access, that the a dangerous thing to place in or near way if it was left unguarded or unfenced, at the intervention of the third party break the link of causation connecting ng with the injury resulting from it.

the above case may usefully be con- that of Ruoff *v.* Long & Co. (1916, 148). There three men in charge of a s steam lorry, whilst delivering beer, in the highway for a few moments ded, but before leaving it the driver engaged the gear lever and fixed it with pin, the effect of these precautions being start the lorry four operations would ssary. Some soldiers out for mischief the lorry, and the plaintiff, a shopkeeper, d damage. A Divisional Court, re- the decision of the County Court judge, at there was no evidence of negligence; lthough this finding was sufficient to of the case, one of the judges held also en had there been negligence yet the ce would not have been the proximate f the injury, or, in other words, the tion of the soldiers was an independent hich could not reasonably have been ted.

is latter case the third persons who ed were persons of full age, but we may those who are called upon to undertake rk upon or adjoining highways that all people have a right to be on the highway, g children, and therefore the greatest of care is essential, for what might not anger to a grown-up person may well to a child. Lord Justice Hamilton in a recent case (Lathom *v.* Johnson (1913), 1 K.B. 398), where a child had been injured on unfenced ground, said, "Children's cases are always troublesome. English law has been very ready to find remedies for their injuries."

Without entering into this debatable ground, we may suggest that where a child suffers injury from something placed on or near a highway a different standard of care may be demanded from the person placing it there, and it may be more difficult for him to prove the intervention of a fresh and independent cause if it is the action of a child which causes injury to be occasioned by the thing so left to a third person.

THE LONDON MASTER BUILDERS' ASSOCIATION.

The Council found it necessary to meet on three occasions during February. During the month important matters were dealt with by the various trade committees.

We take the following from the February Report :—

The Burden of the War.

The request from the operative societies for advances in wages and alterations to working rules was considered at a special meeting of the Council early in February, and a copy of the following resolution was sent to each of the bodies in question :—"That in the present abnormal conditions of work and market prices and uncertainty of obtaining materials the time is not suitable to arrive at any conclusion as regards alterations in the working-rule agreements, and it is proposed to defer the consideration by mutual consent until a later date, as at present the energies of all concerned are needed for prosecuting the war." This appeal has not so far met with success, and the matter will be considered in due course by the respective joint trade committees.

Restriction of Building Work.

Careful attention is being given to representations from the Ministry of Munitions as to stopping all unnecessary building work in order to increase the supply of labour required for erection of munition factories and other Government requirements. A representative of the Department attended a meeting of the Council of the Association, and broadly defined the procedure that may be necessary, replying to numerous questions, including inquiries as to how far builders and other employers would be protected in respect to the conditions in their contracts if their works were stopped. The interests of members will be carefully watched and so far as possible protected.

Painters and French Polishers.

The Operative Painters in February made application for the recognition of a flat rate of 10d. per hour for painters in London. No working-rule agreement exists with the painters, but the rate recognised by the Association is 9d. for painters and 9½d. for decorators. The Society has been informed that the request cannot be conceded, especially in view of the fact that any advance in existing rates for labour is deprecated by various Government Departments.

The Operative French Polishers made formal application to the Cabinet Trades Federation (whose members employ the bulk of that class of labour) for an increase of 1d. per hour on the existing rate of 9½d. Neither this Association nor the Cabinet Trades Federation has a working-rule agreement with the french Polishers, and the Federation after meeting the operatives declined to concede the demand. It is hoped that members who employ french polishers will support the action of the Cabinet Trades Federation and also take what steps are possible to induce any piece-master they may employ to do the same, as the present rate of wages for french polishers compares very favourably with the rates of wages in the other trades.

THE YORKSHIRE FEDERATION OF BUILDING TRADES EMPLOYERS.

The monthly meeting of the Executive Council was held in the Standering Hall, New-lane, Selby, on Thursday, March 16. Mr. R. Finch (President) occupied the chair and thirty-nine delegates were present.

Belgian Builders' Relief Fund.

The National Federation has issued an urgent printed appeal for increased funds for this beneficent purpose. The President earnestly commended the appeal to the generous support of members, and hoped all would appreciate the opportunity afforded of extending practical sympathy with Belgian *confrères* whose necessities are urgent and whose claims are most deserving.

Munitions Act, 1916.

Representatives of the National and Yorkshire Federations have been favoured with interviews with principal officials of the Ministry of Munitions, and placed before them the serious shortage of labour in the building industry, and the necessity of securing sufficient and efficient labour for works for military and naval purposes. The officials stated that similar representations had been made by Government officials concerned in the letting of work and placing of contracts. The matter is being very carefully considered, and promise was made that the earliest possible intimation would be given of the decision of the Special Committee dealing with the subject.

Home Problems after the War.

An official invitation for the Federation to be represented at the National Congress to consider Home Problems after the War, to be held in London from April 11 to 14, was considered. The National Federation had called the attention of the County Federations and local associations to the importance of the Conference, and recommended that the invitation should be given serious and sympathetic consideration. It was resolved :—"That the Federation be represented at the Conference and that the President, Mr. Sinclair, and the Secretary be appointed as the representatives. Also that the local associations be urged to appoint representatives to the Congress, as its decisions may be of vital importance to building trade employers."

PRIMITIVE ARRANGEMENTS.

We have before us an amusing letter from a military officer in India, in which he regrets the primitive methods in existence there. He says :—"Water supply arrangements in India are odd. They lay on the water in the streets, and sometimes actually up to buildings, but never put a tap in the bathrooms. For instance, in this really nice comfortable, even luxurious, hotel, in which each bedroom is provided with a bathroom, and in it a beautiful full-sized Jennings bath, the water is heated by the bachti in an old kerosene tin, on a charcoal stove, Stone-Age type, and is poured into the bath in somewhat minute and intermittent quantities. When you have bathed you pull up the plug, and the water flows through on to the floor, passing through an orifice provided in the wall of the building, and so to the garden below. Very sad to see a Jennings bath standing all lonely in the middle of a whitewashed room of fair size and not a pipe or a tap connected thereto to give the poor thing some hold on life."

Messrs. Jennings, in sending us this letter, say :—"It is hardly necessary to mention that we were asked to supply these baths through a firm of merchants, and were in no way concerned in regard to the installation of them."

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—At a recent meeting of the T.C. plans were submitted by the Burgh Surveyor for an alteration at the police workshops. The Plans Committee of the T.C. has passed plans of the following new buildings:—Alterations and additions in connection with the dwelling-houses, No. 60, Union-row, for Mr. G. G. Littlejohn, house proprietor, per Messrs. Wilson & Walker, architects; alterations on shop front at No. 199, Union-street, for the North of Scotland Canadian Mortgage Company, Ltd., per Mr. G. B. Mitchell, architect; alterations at Nos. 151 and 155, Union-street, for Messrs. M'Millan, Ltd., per Messrs. E. Pollard & Co., Ltd., London; addition to wooden pavilion at the City Hospital, for the T.C., per Mr. John Rust, architect; store at No. 80, Spring-garden, for Messrs. William M'Kinnon & Co., Ltd.; polishing mill and dressing sheds on the north side of Merkland-road East, for Mr. Robert Crofts, granite merchant, per Mr. George Watt, architect; two dwelling-houses on the west side of Brighton-place, for the Northern Garden Suburbs, Ltd., per Messrs. D. & J. R. M'Millan, architects; two dwelling-houses on the west side of Brighton-place, for the Northern Garden Suburbs, Ltd., per Messrs. D. & J. R. M'Millan, architects; additions and alterations on premises, No. 55, Blenheim-place, for Mr. Andrew Alexander, cabinetmaker, per Mr. R. R. Gall, architect; addition in connection with Home for Soldiers and Sailors on the west side of College-street, for Miss Reid, Albyn-place, per Mr. John Rust, architect.

Barrow.—The T.C. has appointed a sub-committee to prepare a scheme for the provision of houses for their workmen.

Brighton.—Plans have been passed for the alterations to the interior of the Hippodrome.

Bristol.—At a recent meeting of the Bristol Docks Committee an application was submitted from the Dockers' Union, supported by members of the Bristol Cartowners and Warehousekeepers' Association, for permission to erect a shelter for trace horses on the quay adjoining the approach to Bristol Bridge on the downstream side. The matter was left for further negotiation between the officers and the parties interested, the committee expressing their willingness to favourably consider a suitable proposal.

Calgary.—The Ford Motor Company has decided to establish an assembling plant at Calgary, and has bought a site in the city for that purpose.

Catterick.—At the Bedale Police Court recently plans were submitted to the magistrates on behalf of Mr. Haswell, Darlington, for a cinematograph building to be erected at Scotton.

Droylesden.—The D.C. has approved plans of seven houses to be built in Baguley-street, for Mr. F. Houghton.

Dublin.—The Corporation has decided to raise £8,000 out of the rates for the purpose of erecting a number of working-class dwellings. The Dublin Municipal Council has sanctioned proposals to take over the Newfoundland-street area, on which the intention is to build cottages, when they have obtained the money and the sanction of the L.G.B. The Council has also adopted the recommendation of the Housing Committee for a loan of £138,944 on the North Lotts area for the purpose of building a large number of cottages.

Dukinfield.—The following plan has been recommended to the T.C. for approval:—New joiners' shop and offices in Railway-street, for the Stamford Building Company, Ltd.

Dundee.—Plans of proposed new buildings, etc., in Dundee have been lodged at the office of the City Engineer as follows:—Overgate, addition to office, for Messrs. Kirk & Coutts; Panmure-terrace, Barnhill, garage, etc., for Mr. James Fearns; Byron-street, extension of, for Messrs. Francis Stevenson & Sons and the Bank of Scotland.

Glasgow.—The following linings have been granted at Glasgow Dean of Guild Court:—The Ioco Proofing Company, Ltd., Netherton Works, Anniesland, to erect a store and drying-room there; Messrs. Campbell, Achnach, & Co., Ltd., indiarubber manufacturers, to add to their works in Commerce-street; Messrs. Gibson Brothers & Co., to erect a factory in Cogan-street, Pollokshaws; Messrs. R. S. M'Coll, Ltd., 142, North Woodside-road, to extend their premises there; De Luxe Picture House, Ltd., 38, Bath-street, to alter their premises at 417, Sauchiehall-street; Messrs. Thomas Melvin & Sons, Ltd., to make extensions to their engineering shop at Charles-street, St. Rollox.

Hitchin.—The U.D.C. has approved Mr. W. S. Dickinson's plans of a "portable" building, proposed for erection on the east side of Bancroft.

Hollingbourne.—The R.D.C. has approved plans of a new bungalow for Mr. J. H. Gibson, Headcorn, and of a bakery, cottage, new sawmill, and engine-house, for Mr. Drageas, Harrietsham.

Horbury.—Plans passed by the D.C.:—Saw shed at the Calder Grove paper works, for Messrs. C. Marsden & Sons, Ltd.; extensions to boilerhouse at the Albert Mills, for Messrs. R. Poppleton & Sons; office at Springend for Messrs. Jessop Bros.; additions to sub-station at the works of the Yorkshire Railway Waggon Company, Horbury Bridge; conversion of cottage in Barker-road, for Mrs. Hargreaves; and cottage at Back-lane, for Mrs. Ainsworth.

India.—A new palace is to be built for the Rajah of Dharakota at Dharakota, in the Ganjam district, from the designs of Mr. Stephen Wilkinson, architect, Calcutta.

Kirkburton.—At a recent meeting of the Kirkburton Council it was resolved that tenders be obtained for spraying the main road with prepared tar, and for 150 yds. of kerb to be delivered at Paddock for the footpath. Plans of a proposed dwelling-house and shop to be erected in North-road, Kirkburton, for Mr. W. Elliott, was approved.

Lincoln.—The City Council has passed plans of new buildings to be erected by Messrs. Clayton & Shuttleworth, Ltd., on the north side of the River Witham.

Luton.—The T.C. has passed the following plans:—Additions for Messrs. G. Kent, Ltd., Biscot-road, and Vauxhall Motors, Ltd., Kimpton-road; a motor garage and showrooms for Bates' Motor Works, Ltd., at Dunstable-road; and extensions and two chimney shafts at the works of the Thermo Electric Ore Reduction Corporation, Ltd., York-street.

Market Drayton.—The U.D.C. has accepted the tender of Mr. T. Healey for carrying out the construction of the cinema operating-room at the Town Hall.

Peterborough.—The C.C. has passed plans for the erection of forty-eight new houses in Thistlemoor-road and Durham-road, at New England.

Sturminster Newton (Dorset).—Sanction has been given to Mrs. W. H. Creech for structural alterations contemplated at the Baker's Arms Inn at Childe Okeford. Plans prepared by Mr. G. Hunt, architect, Blandford.

Sutton-in-Ashfield.—The U.D.C. has passed the following plans:—Joiner's shop in Fox-street, for Mr. A. Searson; stores at the Mason's Arms Inn, Eastfield-side, for Mr. G. R. Bailey.

Swindon.—The T.C. has approved the following plan:—Mr. J. J. Brown, corrugated-iron football dressing-room, rear of Lock House Cottage.

Tilbury.—The U.D.C. has adopted a report by their Surveyor on a town-planning scheme, and has asked the Clerk to obtain the approximate cost of the necessary expert evidence and advice, and bring these before the Town-Planning Committee.

Uxbridge.—The R.D.C. has accepted the tender of Mr. Filkins for the raising of the centre walls in the pump wells at Harefield new sewage scheme.

West Thurrock.—Messrs. E. N. Clifton & Sons have notified the Orsett R.D.C. that it is proposed to erect at West Thurrock a margarine factory for Messrs. Jingens & Co. The works would comprise a reinforced concrete structure with oil tanks and river wharf.

Weymouth.—Plans passed by the T.C.:—Submitted by Mr. S. Jackson, for motor garage, Cromwell-road, for Mr. R. F. Bugler; submitted by Mr. S. Jackson, for alterations to greenhouse, store, and cokehouse, at the rear of Dorset House, Chapelhay, for Mr. Benjamin Risley; submitted by Messrs. Jesty & Baker, for motor garage at end of stable yard, Spring-road.

Yiewsley.—The Public Health and Allotments Committee of the U.D.C. has instructed their inspector to interview the owner of Florence and Leonard Cottages, Horton-lane, with a view to repairs being carried out at an early date.

TRADE NEWS.

The extensions to Willerby Asylum, Hull, have been supplied with Shorland's special inlet and extract ventilators by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Under the direction of Messrs. Sydney Mitchell & Wilson, architects, Edinburgh, the Boyle system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to Hairmyres Sanatorium, Lanarkshire.

We learn that a tank on Lord Donoughmore's estate at Knocklofty, Clonmel, was constructed with Pudloed cement concrete two years ago. Upon recent examination it appears to be in a perfect condition. It had been subjected to a severe test in the interim.

NEW GOVERNMENT CONTR

War Office.

Apparatus, Drain-Cleaning. — Ca
Robey, & Co., Caroba Works, Hi
Wood Green, N.; Marshall Bro
Icknield-street, Birmingham.
Bolts and Nuts.—Bayliss, Jones, &
Ltd., Wolverhampton; F. W. Cotter
Atlas Works, Darlaston; J. Gadd & So
Blackheath, Birmingham; Horton & S
New Alma Works, Darlaston; Nuts a
(Darlaston), Ltd., Foster-street, D
Steel Nut and J. Hampton, Ltd., Wed
J. Wiley & Sons, Ltd., Eagle
Darlaston.
Buildings, Sectional. — Humphrey
Knightsbridge, S.W.
Railway Plant.—Bayliss, Jones, &
Ltd., Wolverhampton; Guest, Keen,
folds, Ltd., London Works, near Birn
and Dowlais, Glam.; R. Hudson, Ltd.
some Foundry, near Leeds.
Safes, etc.—Chubb & Son's Lock
Company, Ltd., Wolverhampton; S.
& Co., Ltd., West Bromwich.
Sashes, etc., Deal.—E. Pollard & C
29, Clerkenwell-road, E.C.
Screws, B.A.—A. Stokes & Co., 56
street, Birmingham.
Erection of: Buildings at Lilbourne
well, 125, Clifton-road, Rugby: buil
Lympne: The Thames Steam Saw Mi
123, Cannon-street, E.C.; buildings
ford: T. W. Thompson & Co., Ltd.,
Tottenham-court-road, W.C.; coal
Dreghorn, Duddingston, and Glencors
J. R. Watson, Ltd., Iona-street, Edi
coaling plant pier at Woolwich: F
Chalmers, Ltd., Erith, Kent; huts,
Chatham: Barden & Head, 12, Unio
Maidstone; huts at Woodcote Park F
Roll & Taylor, High-street, Epsom;
house, etc., at Thetford: Mann, Eg
Co., Ltd., 379/381, Euston-road,
shelters, etc., at Walney; R. Costain
Blundellsands; shelters, etc., at Wyto
ingdon: F. B. Thackray & Co., Ltd
ingdon; glazing to roofs at Woolwich
well & Co., Ltd., 11, Victoria-stree
minster, S.W.

India Office, Store Departmen

Cement.—Associated Portland Cemen
facturers, 8, Lloyds-avenue, E.C.

H.M. Office of Works.

Building Works, etc.—Canada Hous
way, partitions, etc.: William Taylo
(Hammersmith), Ltd., Lower Mall,
smith, W.; Crombie, Fife, erection of
Robert Bruce & Son, 45, York-plac
burgh; Liverpool Censor's Office, p
etc.: Isaac Dilworth & Sons, 1, Childw
Wavertree, Liverpool. Ordinary wo
repairs to buildings in the following
to March, 1917.—Birmingham: J. E.
76-80, Lombard-street, Birmingham;
F. Chown, Bath-buildings, Montpelier,
Cardiff: Joseph Thomas, Mardy-stre
diff; Manchester and Salford: W.
& Co., 126, Broughton-street, Cl
Manchester; Sheffield: Ash, Son, &
Ltd., 25, Union-lane, Moorhead, S
Windsor: Hollis & Sons, St. Leonar
Windsor.
Miscellaneous.—Birmingham Parcel
wood-block flooring: Hollis Bros. & C
Jameson-chambers, Hull; iron sand-
covers (200): Baxendale & Co., Ltd.
street, Manchester; gasfittings, suppl
March, 1917: R. Laidlaw & Son, Ltd.
square Works, Edinburgh; London, g
work to March, 1917: Cannon &
Stanbury-road, Peckham, S.E.

Post Office.

Laying Earthenware Ducts and
Pipes in Old-street, Great Eastern-stree
J. A. Ewart, Ltd., 21, Old Queen-stree
minster, S.W.

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REINFORCED CONCRETE GRAIN ELEVAT
AUSTRALIA.

In our article on Grain Elevators la
p. 217, we omitted to mention that w
article described the Armour elevato
has a capacity of 10,000,000 bush
illustration at our disposal showed the
Elevator, the capacity of which is 2
bushels. Both are designed by Messrs.
Metcalf & Co., Ltd., of 36, Southampto
Strand, W.C.

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* See also our list of Competitions, Contracts, etc., on page 240.

PATENTS.

APPLICATIONS PUBLISHED.*

of 1914.—Lancelot William Lees: covers and frames.

of 1915.—John Spencer, Ltd., and Horton: Valves and fittings for auto- rinkler and alarm systems.

of 1915.—Horace Leonard Short: 's for cooling circulating liquids.

of 1915.—Francesco Pucillo: Structures s for buildings or the like.

of 1915.—Frederick Thackeray: for concrete walls, floors, and roofs.

of 1915.—Christian Johannes Andreas Machine for making concrete slabs nd especially roofing tiles.

of 1915.—Charles Barnard Budorn Schuckertwerke Ges., Germany): l safety fuse devices.

of 1915.—Thomas Robson Charlton: echanism for use in connection with nd the like.

of 1915.—James Menzies, Henry Dennis, and Herman Moliter Moll: s for the destructive distillation of nd the like.

of 1915.—John Graham Thomson: for excavating, entrenching, and the

of 1915.—Arthur Benham and Thomas Smith: Reinforced concrete.

of 1915.—Nickolaus Binger: Machines ing and nailing boards.

of 1915.—Frank Albert Stiers: Street s.

of 1915.—Jacobus Jan Willem Van Der Toorn: Manufacture of a or building constructions and building ion elements.

of 1915.—Ottomar Oskar Erfurth ernationale Patentverwertungs Ges. Clay purifiers.

of 1915.—Albert Thomas Greenaway ns, Ltd.: Clip or clamp for hose-pipes ike.

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E LONDON COUNTY COUNCIL.

ortnightly meeting of the London 'ouncil was held on Tuesday in the Iall, Spring-gardens, S.W., Mr. Alfred n, Chairman, presiding.

.—Tenders were received for the f wood paving blocks and Guernsey etts for the Tramways Department.

-Sanction was given to the borrowing Westminster City Council of £3,000 ributions towards cost of street ent.

nal School Accommodation, Willesden. ucation Committee reported that the local education authority propose e a new temporary school for about ian children at Kensal Rise.

—In a report submitted by the ents Committee it was stated that, nce of its policy in arranging for of the Strand, the Council acquired which has about forty years to run, of Strand, W.C. The Government of stralia has offered a rent of £850 a e first year and £1,000 for the second years for a tenancy for three years emises, and has asked for an option, rcised within the three years, of for £12,500 the Council's leasehold the portion of the site of the premises ately required for the widening. il accepted this offer.

Cross Railway Bridge.—On the Mr. Gillett, it was agreed that it be the Parliamentary Committee to nd report on the advisability of in the second House, against the stern and London, Chatham, and ilways Bill, a petition seeking that or the alteration of the Charing Cross ridge shall be submitted to and y the Council as being the Central tive Authority in London.

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se applications are in the stage in sition to the grant of Patents upon e made.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Brick-layers.	Car-penters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Masons' La-bourers.	Brick-layers' La-bourers.	Plas-terers' La-bourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7½	7½	7½
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	9	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	10¼	10¼	10¼	9¾	10¼	9¼	7¼	7¼	7¾
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	8¾	8¾	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8½	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10½	10½	10	10	8½	7½	7½	8
Leicester	10½	10	10½	10½	11	10	9	7½	7½	8
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8¼	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8¼	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10½	10½	10½	10½	9½	10½	9	8	8	8½
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6¼	6¼	6¼
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10¾	10	9	9¾	7¼	7¼	7½
Swansea	9¾	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv.; Public Appointment, xx; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be d for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while very endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 25.—**Cwm (Mon.).**—CHAPEL.—For the erection of a chapel at Cwm, Mon., for the Wesleyan Methodist Connexion. Plans, etc., of Mr. R. L. Roberts, M.S.A., Abercarn and Newport.

MARCH 25. — **Rhymney.** — ALTERATIONS TO CELLARS.—For alterations to the cellars at the Brewery, Rhymney, for Messrs. A. Buchan & Co. Plans may be seen at the Brewery, Rhymney, Mon, and at the offices of Mr. Thomas Roderick, architect, Ashbrook House, Aberdare.

MARCH 27.—**Morley.**—RE-ERECTION OF PREMISES.—Re-erection (after fire) of three-story mill premises at Deanfield Mills, Morley, for Mr. James Barker. Plans, etc., of Mr. T. A. Buttery, Licentiate, R.I.B.A., Queen-street, Morley, architect and surveyor.

APRIL 1.—**Hayes.**—WORKMEN'S DWELLINGS.—For the erection of fifty-two workmen's dwellings, the laying-out of the site, and construction of fences, paths, drains, etc., for the U.D.C. Drawings, etc., of Mr. Douglas C. Fidler, Architect and Surveyor, Council Offices, Grange-road, Hayes End, Middlesex.

APRIL 5.—**St. Lawrence (Ireland).**—COTTAGES.—For building twelve labourers' cottages at St. Lawrence, Chapelizod, for the South Dublin R.D.C. Plans, etc., at the Offices of the R.D.C., 1, James's-street, Dublin.

NO DATE.—**Birr.**—PAINTING, ETC.—For the painting and decoration of St. Brendan's Church, Birr, for the Very Rev. Dean Seanlan, P.P., V.G. Specification, etc., of the architect, Mr. Thos. J. Cullen, M.R.I.A.I., 25, Suffolk-street, Dublin.

NO DATE.—**Blackpool.**—PAINTING.—Blackpool South Shore Pier and Pavilion Company, Ltd., Victoria Pier, Blackpool, invite tenders for painting pier, pavilions, and shops. Particulars on application to the Secretary.

NO DATE.—**Glangevlin (Co. Cavan).**—IMPROVEMENTS.—For the execution of improvements to St. Patrick's Church, Glangevlin, Co. Cavan, for Rev. P. McGriskin, P.P. Plans, etc., can be seen at the Parochial House, Glangevlin, or at the offices of Mr. J. J. McDonnell, F.R.I.A.I., 27, Chichester-street, Belfast.

NO DATE. — **Grassington.** — SHOP. — For the erection of a new branch shop at Grassington for the Skipton Co-operative Society, Ltd. Mr. James Hartley, architect. Skipton.

NO DATE.—**South Sole.**—HOUSE.—For the erection of a small house, situate at South Sole, about one mile from Harvel Hill and three miles from Meopham Station, for Sergt.-Major Fogarty, R.F.A. Plans, etc., from Mr. F. Howarth, architect, Towyn, S.O., Merioneth.

NO DATE.—**West Suffolk.**—REPAIRS, ETC.—The West Suffolk E.C. invite tenders for repairs, etc., at various Council schools. Specifications, etc., of the County Architect, Mr. A. A. Hunt, 51, Abbeygate-street, Bury St. Edmund's.

FURNITURE, MATERIALS, etc.

MARCH 24.—**Kilmallock.**—MATERIALS.—Supply to the B.G. of builders' materials from April 1, 1916, to March 31, 1917. Forms of tender of Mr. P. J. Coll, Clerk of Union, Kilmallock Union Offices. Deposit, £3.

MARCH 25.—**Oldbury.**—BRICKS, ETC.—Supply to the U.D.C., for twelve months, of bricks, etc. Forms of tender, etc., of Mr. Thos. G. Shipton, Surveyor, Public Offices, Oldbury.

MARCH 25.—**Portsmouth.**—OILS AND PAINTS.—Supply to the Corporation for six or twelve months of oils and paints. Specification, etc., at the Town Clerk's Office, Town Hall.

MARCH 25. — **Waterloo-with-Seaforth.** — MATERIALS.—Supply to the U.D.C. of builders' materials during the year ending March 31, 1917. Specifications, etc., from Mr. F. Spencer Yates, Assoc.M.Inst.C.E., Surveyor to the Council, Town Hall, Waterloo.

MARCH 27.—**Canterbury.**—PAINTERS' MATERIALS.—Supply to the Guardians for six months of painters' materials, etc. Forms of tender, etc., of Mr. John Plummer, Clerk to the Guardians, 80, Castle-street, Canterbury.

MARCH 27.—**Dundee.**—MATERIALS.—Supply to the Dundee Gas Commissioners of builders' materials, etc., for the year ending May 15, 1917. Specifications, etc., of Mr. Alex. Yuill, Engineer and Manager, Gas Works, Dundee.

MARCH 27.—**Durham.** MATERIALS.—Supply to the Visiting Committee of Durham County Asylum of builders' materials. Forms and conditions of tender of the Steward at the Asylum.

MARCH 27.—**Ipswich.**—PAINTERS' SUNDRIES.—Supply to the B.G. for three months of painters' sundries. Forms of tender at the Guardians' Offices, 19, Tower-street, Ipswich.

MARCH 27.—**Liverpool.**—MATERIALS.—Supply to the P.C. of building materials. Mr. Gaius W. Coster, Clerk to the Select Vestry, Parish Offices, Brownlow-hill, Liverpool.

MARCH 28. — **Westhoughton.** — MATERIALS. — Supply to the U.D.C. of builders' materials for twelve months. Forms of tender of Mr. Thos. Partington, Clerk to the Council, Town Hall, Westhoughton.

MARCH 29.—**Edinburgh.**—MATERIALS.—Supply to the Edinburgh and District Water Trustees of builders' materials during the year commencing Whit Sunday next. Specifications at the office of the Engineers, 12, St. Giles-street, Edinburgh.

MARCH 29.—**Stoke-on-Trent.**—GRANITE STONE, ETC.—Supply to the Guardians' Institution of granite stone, oils, and paints, etc. Forms, etc., at the Union Offices, Stoke-upon-Trent.

MARCH 30.—**Manchester.**—MATERIALS.—Supply to the Lancashire and Yorkshire Railway of builders' materials for twelve months. Forms of tender of Mr. Waring, Stores Department, Osborne-street, Manchester.

APRIL 1. — **Edinburgh.** — MATERIALS, ETC. — Supply to the Corporation of builders' materials, etc. Mr. Thomas Hunter, W.S., Town Clerk, City-chambers, Edinburgh.

APRIL 1.—**Hyde.**—MATERIALS.—Supply to the Corporation of builders' materials Forms of tender of the Borough Surveyor, Town Hall, Hyde.

APRIL 3.—**Pontypridd.**—MATERIALS.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Forms of tender, etc., of Mr. W. E. Lowe, Engineer and Surveyor, Municipal Buildings, Pontypridd.

APRIL 3.—**Rosslynlee.**—PLUMBERS' MATERIALS, ETC.—Supply to the Midlothian and Peebles District Asylum, Rosslynlee, for six months of plumbers' material, etc. Forms of tender of the Clerk and Treasurer, 19, Heriot-row, Edinburgh.

ENGINEERING, IRON, AND STEEL.

MARCH 25.—**Pontypridd.**—PIPES, ETC.—Supply to the Pontypridd and Rhondda Joint Water Board of cast-iron pipes and specials and iron, steel, tools, picks, hammers, etc. Tender forms, etc., at the Waterworks Engineer's Office, 27, Gelliwastad-road, Pontypridd. Deposit, 10s. 6d.

APRIL 3.—**Marykirk.**—RENEWAL OF VIADUCT, ETC.—The Directors of the Caledonian Railway Company invite tenders for the removal of the existing cast-iron superstructure of the viaduct carrying the company's main lines over the River North Esk, near Marykirk, and in construction of a new steelwork superstructure, the supply, delivery, and erection of about 900 tons of wrought steelwork. Drawings, etc., of the Company's Engineer, Buchanan-street Station, Glasgow. Deposit, £2 2s.

ROAD, SANITARY, AND WATER WORKS.

MARCH 25. — **East Grinstead.** — MATER Supply to the U.D.C. of road material. F of tender from Mr. W. B. Woollam, Enginee Surveyor to the Council, Council Offices, Lo road, East Grinstead.

MARCH 25. — **Southwick-on-Wear.** — STO Supply to the U.D.C. of road stone fo twelve months ending March 31, 1917. For tender of Mr. John W. Robson, Clerk, Co Offices, Southwick-on-Wear.

MARCH 25.—**Stafford.**—GRANITE, ETC.—S to the R.D.C. of granite and slag. For tender from the Surveyor, Mr. F. Idie Crabbery-street, Stafford.

MARCH 25.—**Witham.**—GRANITE CHIPPIN Supply to the U.D.C. of ⅜-in. granite chip Mr. Wm. Bindon Blood, Clerk to the Co Witham, Essex.

MARCH 25.—**Witham.**—TAR.—Supply to U.D.C. of refined tar. Mr. Wm. Bindon I Clerk to the Council, Witham, Essex.

MARCH 27.—**Bollington.**—GRANITE MACAD Supply to the U.D.C. of about 350 tons of g macadam. Particulars of Mr. Samuel K Clerk, Council Offices, Bollington.

MARCH 27. — **Chester-le-Street.**—MATER Supply to the R.D.C. of road material fo year ending March 31, 1917. Forms of te etc., from Mr. Geo. W. Ayton, Highway veyor, Chester-le-Street.

MARCH 27.—**Saddleworth.**—MATERIAL.—S to the U.D.C. of material for road re Tender forms, etc., of Mr. J. H. Reynolds veyor, Council Offices, Uppermill, near Ol

MARCH 27.—**Seaham Harbour.**—ROAD ETC.—Supply to the U.D.C., for the year e March 31, 1917, of road metal and ke cement, sanitary pipes, brooms, and sh Form of tender of Mr. W. R. Robinso Council's Surveyor, Council Offices, S Harbour.

MARCH 28.—**Great Crosby.**—MATERIAL.—S to the U.D.C. of road material during th ending March 31, 1917. Specifications fro Joseph A. Wright, Surveyor, Council Coronation-road, Great Crosby.

MARCH 28.—**Hadleigh.**—GRANITE.—Supp the U.D.C. of about 650 tons of 1½-in. an tons of 2-in. granite. Mr. Harold W Grimwade, Clerk, Urban District Council Hadleigh, Suffolk.

MARCH 28.—**Oystermouth.**—MATERIAL.— to the U.D.C. of road material, etc. Part of the Surveyor to the Council, Council Mumbles.

MARCH 31.—**Faversham (Kent).**—GRA Supply to the Corporation of about 1,300 granite broken to a 2-in. gauge. Mr Tassell, Town Clerk, 20, West-street, Fave

MARCH 31.—**Truro.**—STONE.—Supply t R.D.C. of stone. Tender forms of Mr. S. G Surveyor, Callestick, S.O.

APRIL 1.—**Moulton.**—BROKEN GRANITE.— to the R.D.C. of about 500 tons of 1½-in. gauge best broken granite. Tender form Mr. T. H. Brown, Acting Clerk to the C Deva Chambers, Newmarket.

Public Appointment

* MARCH 30.—GENERAL ASSISTANT.—The market U.D.C. invite applications for the temporary post. Salary not stated.

Auction Sale.

* APRIL 26.—Messrs. Churchill & Si sell by auction, at the Great Hall, Win House, Old Broad-street, E.C., an ass of deals, battens, boards, timbers, etc.

[Those with an asterisk (*) are advertised in this issue.]

CES CURRENT OF MATERIALS.

g to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

our last issue glazed bricks, sheet and white lead, eral other prices have been increased.—ED.

r aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest st. Quality and quantity obviously affect prices t which should be remembered by those who se of this information.

BRICKS, &c.

,000 Alongside, in River Thames.	£	s.	d.
ocks	2	0	0
Stocks for Facings	2	12	0

1,000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
s	1	10	0	Best Blue Pressed Staffordshire ..	4	15	0
areham	3	12	0	Do. Bullnose ..	5	0	0
d Pressed on Facing	5	5	0	Best Stourbridge Fire Bricks ..	4	15	0
BRICKS— White,				D'ble Str'tch'rs	18	17	6
, and				Double Headers	15	17	6
Glazed chers ..	13	7	6	One Side and two Ends	19	17	6
s	12	17	6	Two Sides and one End	20	17	6
Bullnose 4½ in.	16	17	6	Splays and Squints	18	7	6

econd Quality £1 per 1,000 less than best.

	s.	d.	
Ballast	7	9	per yard, delivered.
and Pit Sand	8	0	,, ,, ,,
ashed Sand	9	0	,, ,, ,,

Per ton, delivered.

	£	s.	d.		£	s.	d.
rtland Cement	2	5	0	..	2	8	0

2 1s. alongside in 80-ton lots.
ete 2s. 6d. per ton extra on above.
ound Blue Lias Lime.... 1 5 6 at rly. depôt.
-The cement or lime is exclusive of the ordinary charge for sacks.
one Lime .... 18s. 0d. per yard delivered.
idge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
TONE — delivered in railway trucks at ourne Park, Paddington, G.W.R., or Lambeth, G.W.R., per ft. cube	1	7
delivered in railway trucks at Nine L. & S.W.R., per ft. cube..............	1	8¾
delivered on road waggons at Nine Elms	1	9¼

ND STONE—

	s.	d.
n Whitbed, in random blocks of 20 ft. rage, delivered in railway trucks at stbourne Park, G.W.R., South Lambeth, V.R., or Nine Elms, or L. & S.W.R. per ft. e	2	5½
o. delivered on road waggons at Pimlico arf or Nine Elms Depôt, per ft. cube ..	2	6½

Basebed, 2d. per ft. cube extra.

BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
r in blocks ..	2	0	Closeburn Red Freestone	2	2
blocks	1	7¼	Red and White Mansfield Random block	2	9
l in blocks	2	4	Yellow Magnesian Limestone do. do.	3	3
Dale in s	2	5			

TONE—*Robin Hood Quality.*

Ft. Cube, Delivered at Railway Depôt.	s.	d.
l random blocks	3	4

er Ft. Super., Delivered at Railway Depôt.

	s.	d.
wn two sides landings to sizes (under super.)	2	5
bed two sides ditto, ditto	2	8
n two sides slabs (random sizes)	1	0½
½ in. sawn one side slabs (random sizes) ..	0	8¼
2 in. ditto, ditto	0	6¾

ORK—

er Ft. Cube, Delivered at Railway Depôt.	s.	d.
l random blocks	3	0

er Ft. Super, Delivered at Railway Depôt.

	s.	d.
n two sides landing to sizes (under 40 ft.)	2	3
bed two sides ditto	2	7
n two sides slabs (random sizes)	1	0
faced random flags	0	5

TILES.

Per 1,000 f.o.r. London.

chine-made tiles or hand-made sand- tiles from either Broseley or	£	s.	d.
rdshire district	2	12	6
ntal ditto	2	15	0
valley tiles (per dozen)	0	5	6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

		£	s.	d.
e Bangor slates,	20 by 10	11	16	0
ality ,,	,, ...	11	10	0
,,	16 by 8	5	15	0
e Portmadoc,	20 by 10	11	13	6
ality ,,	,, ...	11	3	6
,,	16 by 8	5	15	0

WOOD.

r prices should be confirmed, as the market is *changing daily.*

ILDING REDWOOD.

nported sizes. Per standard.

	£	s.	d.		£	s.	d.
in. by 12 in., 4 in. 1 in., 3 in. by 11 in., . by 9 in., and 2 in. 11 in.	33	0	0	..	34	0	0

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

	£	s.	d.		£	s.	d.
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32	0	0	..	33	0	0
Battens: 2 in., 2½ in., and 3 in. by 8 in. .... 2 in., 2½ in., and 3 in. by 7 in. .... 2 in., 2½ in., and 3 in. by 6 in. .... 2 in., 2½ in., and 3 in. by 5 in. .... Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. .... 3 in. by 4 in., and 3 in. by 4½ in.	31	0	0	..	32	0	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0				
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.			

Best Middling Dantzic and Memel Fir Timber Logs — Per load of 50 ft. cube.

	£	s.	d.		
(average specification) ..	10	0	0	..	—
Seconds do. do.	9	10	0	..	—
9 in. to 10 in. do.	8	10	0	..	—
6 in. to 8 in. do.	8	0	0	..	—

Stocks very limited.

Per load.

	£	s.	d.		£	s.	d.
Sawn pitch pine logs (about 35 cu. ft. average)	10	0	0	..	11	0	0
Do. 6 in. to 10 in.	9	0	0	..	10	0	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	10	0	..	7	0	0

Per standard.

	£	s.	d.		£	s.	d.
Best Pitch Pine Deals	34	0	0	..	35	0	0
Under 2 in. thick	0	10	0	extra.			

JOINERS' WOOD.

White Sea First Quality Red:

	£	s.	d.		£	s.	d.
4 in. by 11 in.........	39	0	0	..	40	0	0
3 in. by 11 in. and 2 in, by 11 in.	38	0	0	..	39	0	0
4 in. by 9 in.	37	0	0	..	38	0	0
3 in. by 9 in. and 2½ in. by 9 in.	36	0	0	..	37	0	0
9 in. by 11 in. boards	1	0	0	more than deals.			
7 in. and 8 in. battens	33	0	0	..	34	0	0
7 in. and 8 in. boards	1	0	0	more than battens.			
Seconds quality	2	0	0	less than best.			
Third quality	£2 to £3			less than seconds.			

Archangel White Deals—

	£	s.	d.		£	s.	d.
Best 3 in. by 9 in. and 10 in. and 11 in.	36	0	0	..	37	0	0
Seconds, do.	2	0	0	less than best.			
U.S. Battens	30	0	0	..	32	0	0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

Per square actual.

	£	s.	d.		£	s.	d.
1¼ in. by 6½ in. planed and shot	1	16	0	..	1	19	0
1¼ in. by 6½ in. planed and matched	1	16	6	..	1	19	6
1 in. by 6½ in. planed and shot	1	9	0	..	1	12	0
1 in. by 6½ in. planed and matched	1	9	6	..	1	12	6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1	4	0	..	1	6	0
1 in. by 6½ in. do.	1	10	6	..	1	12	0
⅝ in. by 6½ in. do.	1	0	0	..	1	1	0

Per standard.

	£	s.	d.		£	s.	d.
Columbian or Oregon Pine, best quality	42	0	0	..	44	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.			
Oddments	39	0	0	,,			
Seconds, regular sizes ..	43	10	0	,,			
Oddments	37	10	0	,,			
Kauri Pine—Planks per ft. cube	0	8	0	..	—		
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super., as inch	0	1	0	..	0	1	3
¾ in. do. no...	0	0	10	..	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch	0	1	0	..	0	1	4
Selected, Figury, per ft. super., as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	6	..	0	2	6
Dry Walnut, American, per super., as inch	0	1	0	..	0	1	3 upwards.
French, " Italian," Walnut..	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	0	0	..	21	0	0
Plain Compound Girders, ordinary Sections	22	0	0	..	23	0	0
Plain Compound Stanchions..	23	0	0	..	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	..	21	10	0
Flitch Plates	20	10	0	..	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	..	14	0	0

Turning extra.

METALS (*Continued*).

Per ton, in London.

IRON—	£	s.	d.		£	s.	d.
Common Bars	16	0	0	..	—		
Staffordshire Crown Bars, good merchant quality ..	16	0	0	..	17	0	0
Staffordshire " Marked Bars "	17	10	0	..	18	0	0
Mild Steel Bars	18	0	0	..	18	10	0

Steel Bars, Ferro-Concrete quality, £18 basis price.

	£	s.	d.		£	s.	d.
Hoop Iron, basis price	19	10	0	..	20	0	0
,, ,, Galvanised	30	0	0	..	35	0	0

(*And upwards, according to size and gauge.)

Sheet Iron Black—

	£	s.	d.		£	s.	d.
Ordinary sizes to 20 g.	19	10	0	..	20	0	0
,, ,, 24 g.	20	10	0	..	21	0	0
,, ,, 26 g.	21	10	0	..	22	0	0

Sheet Iron, Galvanised flat, ordinary quality—

	£	s.	d.		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	30	0	0	..	—
Ordinary sizes to 22 g. and 24 g.	30	10	0	..	—
Ordinary sizes to 26 g.	33	0	0	..	—

Sheet Iron, Galvanised, flat, best quality—

	£	s.	d.		
Ordinary sizes to 20 g.	31	0	0	..	—
,, ,, 22 g. and 24 g.	31	10	0	..	—
Ordinary sizes to 26 g.	34	10	0	..	—

Galvanised Corrugated Sheets—

	£	s.	d.		£	s.	d.
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29	0	0	..	—		
Ordinary sizes, 22 g. & 24 g.	29	10	0	..	—		
Ordinary sizes, 26 g.	30	0	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20	10	0	..	—		
Best Soft Steel Sheets, 22 g. and 24 g.	20	15	0	..	—		
Best Soft Steel Sheets, 26 g. ..	22	10	0	..	—		
Cut Nails, 3 in. to 6 in.	21	0	0	..	21	10	0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

LEAD—Sheet, English, 4 lb.	£	s.	d.		
and up	42	0	0	..	—
Pipe in coils	42	10	0	..	—
Soil pipe	45	10	0	..	—
Compo pipe	45	10	0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.		
COPPER—						
Strong Sheet	per lb.	0	1	5	..	—
Thin ,, ...	,,	0	1	6	..	—
Copper nails	,,	0	1	5	..	—
Copper wire	,,	0	1	5	..	—
BRASS—						
Strong Sheet	,,	0	1	3	..	—
Thin ,, ...	,,	0	1	4	..	—
TIN—English Ingots ..	,,	0	1	10	..	—
SOLDER—Plumbers' ..	,,	0	0	11	..	—
Tinmen's	,,	0	1	2	..	—
Blowpipe	,,	0	1	4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.
,, fourths......	6¼d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

		Per Ft.
⅛	Rolled plate	4d.
3/16	Rough rolled and rough cast plate	4½d.
¼	Rough rolled and rough cast plate	4¾d.
	Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral, white..	5d.
	Ditto, tinted	6½d.
	Rolled Sheet	4¼d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	11
,, ,, ,, in barrels	,,	0	4	0
,, ,, ,, in drums	,,	0	4	3
Boiled ,, ,, in barrels	,,	0	4	2
,, ,, ,, in drums	,,	0	4	6
Turpentine in barrels	,,	0	4	1
,, in drums	,,	0	4	4
Genuine Ground English White Lead,	per ton	53	0	0
(In not less than 5 cwt. casks.)				
Red Lead, Dry	per ton	56	0	0
Best Linseed Oil Putty	per cwt.	0	11	0
Stockholm Tar	per barrel	1	12	0
GENUINE WHITE LEAD PAINT— " Blackfriars," " Nine Elms," " Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots	per ton delivered	64	10	0

VARNISHES, &c.

Per gallon.

	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

NEW COMPANIES.

The undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C. :—

Associated Builders, Ltd. (143,148), Primrose-avenue, Wincobank Estate, Firth Park, Sheffield. Registered February 29. Nature of business indicated by title. Nominal capital, £10,000 in 10,000 £1 Ordinary shares.

Till & Kennedy, Ltd. (143,211). Registered March 6. To carry on business of tinplate workers, ironmongers, engineers, founders, smiths, and construct, etc., public works, railways, tramways, etc., and buildings, etc., of every description. Nominal capital, £5,000 in 2,100 £1 6 per cent. Cumulative Preference shares and 2,900 £1 Ordinary shares.

◆

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BASFORD.—For providing and laying cast-iron water main, etc., for extending the present water supply in the parish of Cossall, for the Basford Rural District Council. Mr. S. Maylan, Engineer and Surveyor, Public Offices, Basford, Nottingham :—

A. Hooley	£450	0	0
A. Hyslop	417	18	4
H. C. Pullar & Co.	374	7	9
A. Sykes	317	0	0
J. Clark, Netherfield, Notts.*	290	19	0

BRAINTREE.—For laying drains to connect the Workhouse with the Braintree main in Rayne-road, for the Braintree Rural District Council :—

A. Brown & Son, Braintree*	£84

CARDIFF.—For extensive additions and alterations to the offices of Messrs. Cory Bros. & Co., Ltd., Bute-street, Cardiff. Mr. G. E. Halliday, F.S.A., 9, Quay-street, Cardiff :—

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Symonds & Sons	10,285	0	0
J. Gibson, Cardiff*	9,639	8	0
Building Co., Ltd.	9,436	2	4
Turner & Sons	9,134	0	0

LONDON.—For supplying and laying wood paving along the carriageway in Catford-hill, Catford, S.E., for the Lewisham Borough Council. Mr. Ernest van Putten, M.Inst.C.E., Borough Surveyor :—

Improved Wood Pavement Co., 46, Queen Victoria-street, E.C.*	£2,500	5

LONDON.—For the construction of brick sewer in Barlby-road, and pipe sewer across Ladbroke-grove, by Elgin-crescent, and carrying out incidental works thereto, for the Kensington Borough Council. Mr. William H. Hill, Borough Engineer and Surveyor :—

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SWANAGE.—For a 9-in. pipe in connection the surface-water drainage at Ulwell, for Swanage Urban District Council :—

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All communications must be authenticated b name and address of the sender, whether for public or not. No notice can be taken of anony communications.

The responsibility of signed articles, letters, papers read at meetings rests, of course, with the au

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All drawings sent to or left at this office for consi tion should bear the owner's name and addre either the face or back of the drawing. Delay inconvenience may result from inattention to this

Any commission to a contributor to write an a or to execute or lend a drawing for publication, is subject to the approval of the article or drawing, received, by the Editor, who retains the right to it if unsatisfactory. The receipt by the author proof of an article in type does not necessarily imp acceptance.

N.B.—Illustrations of the First Premiated Des any important architectural competition will alwa accepted for publication by the Editor, whether have been formally asked for or not.

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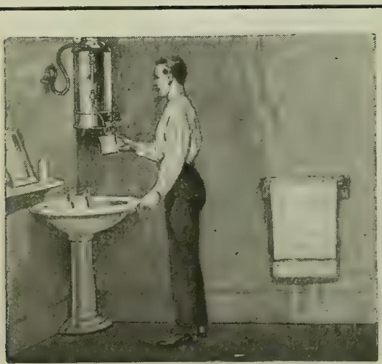

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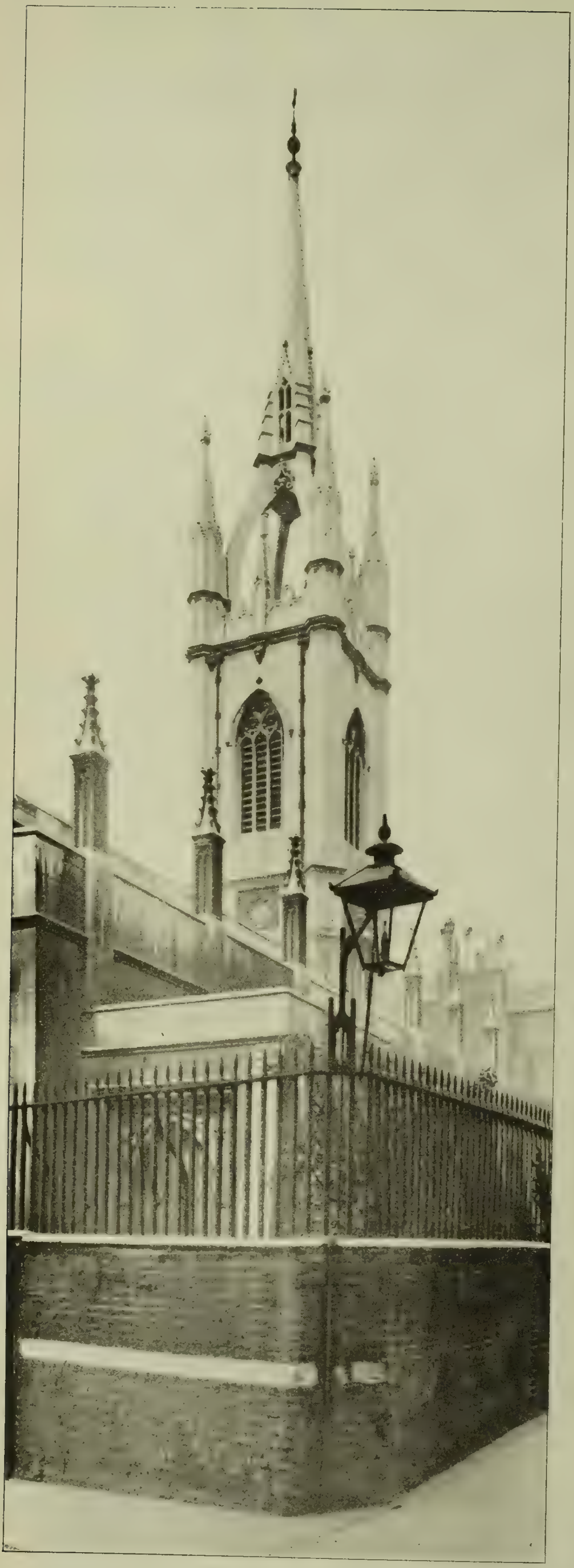

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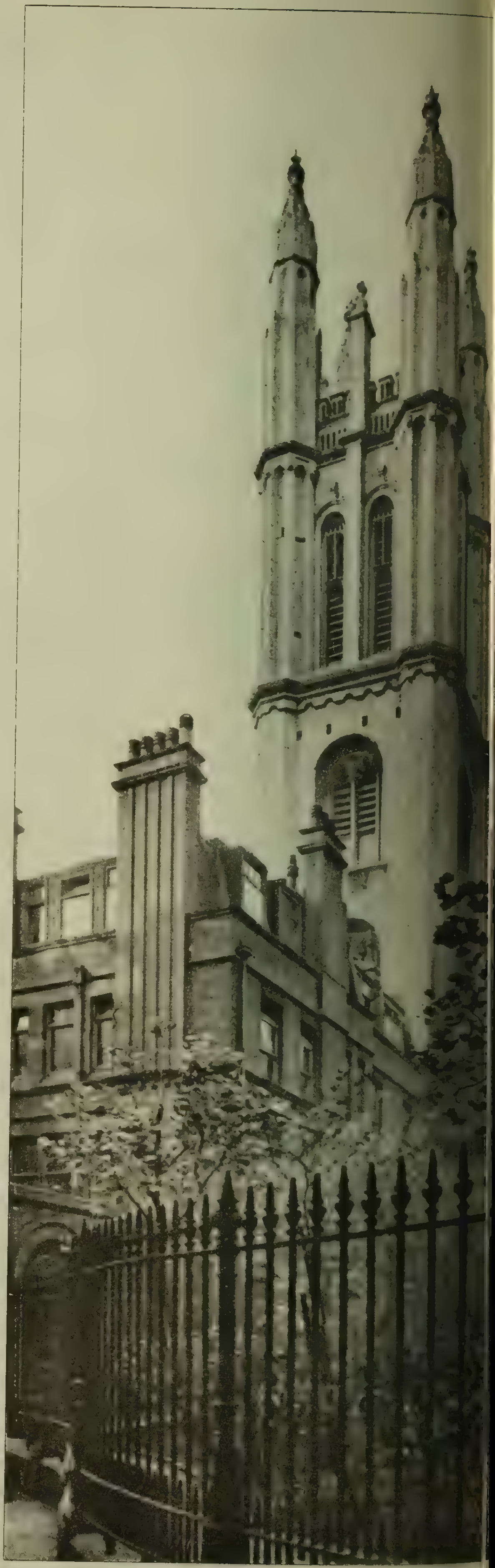

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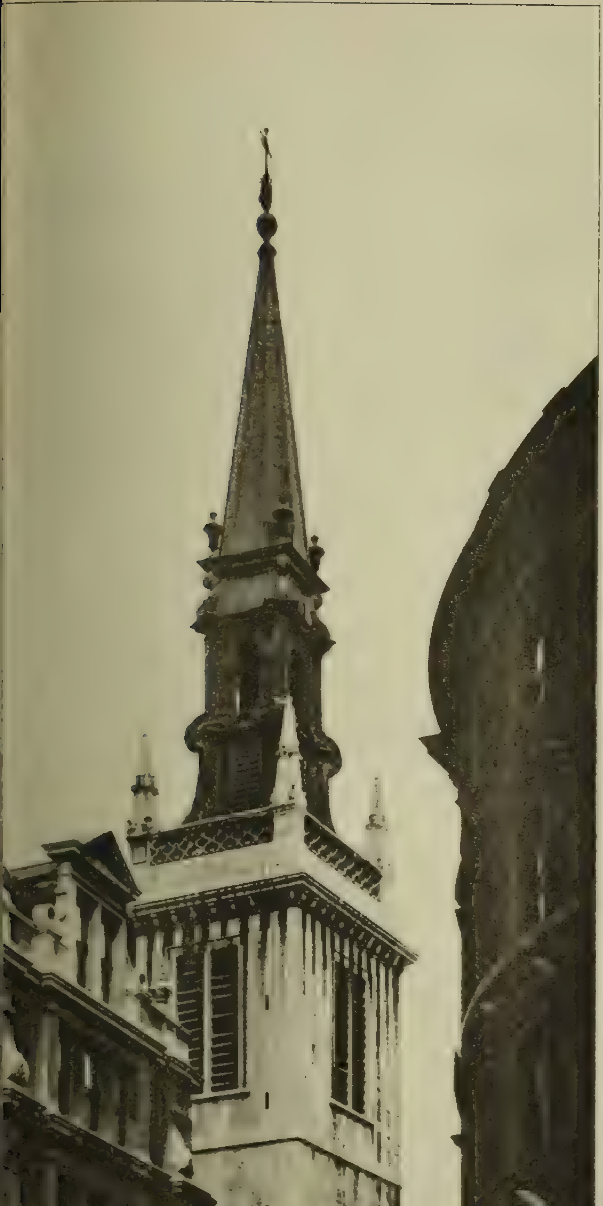
PHOTO: GEO. TR



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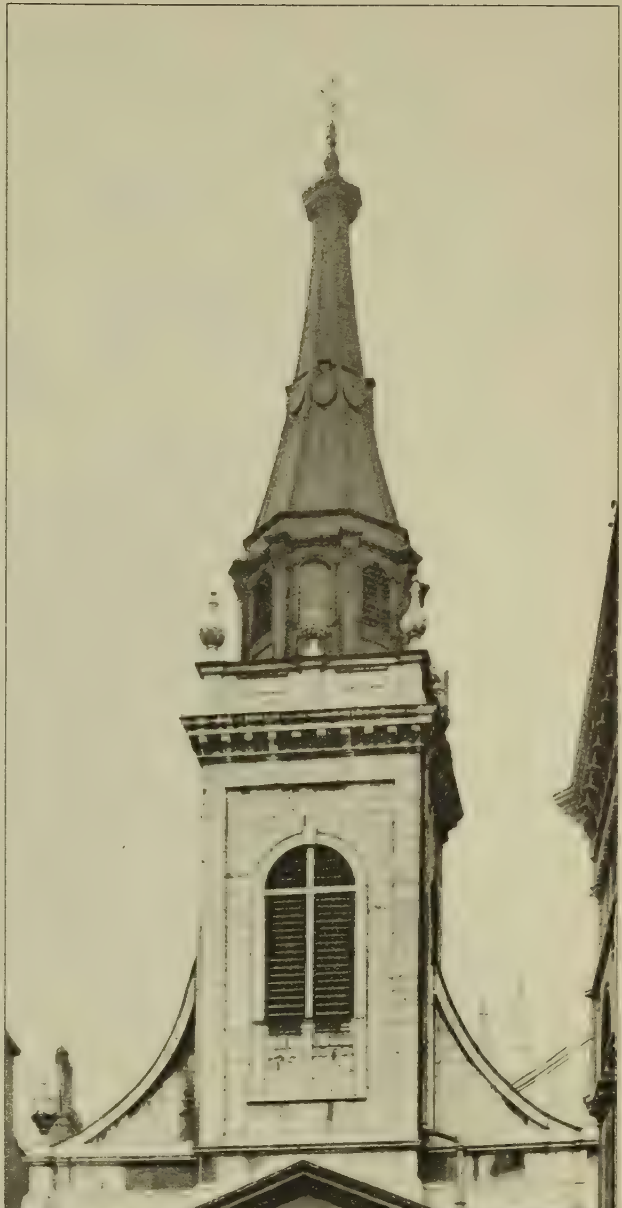

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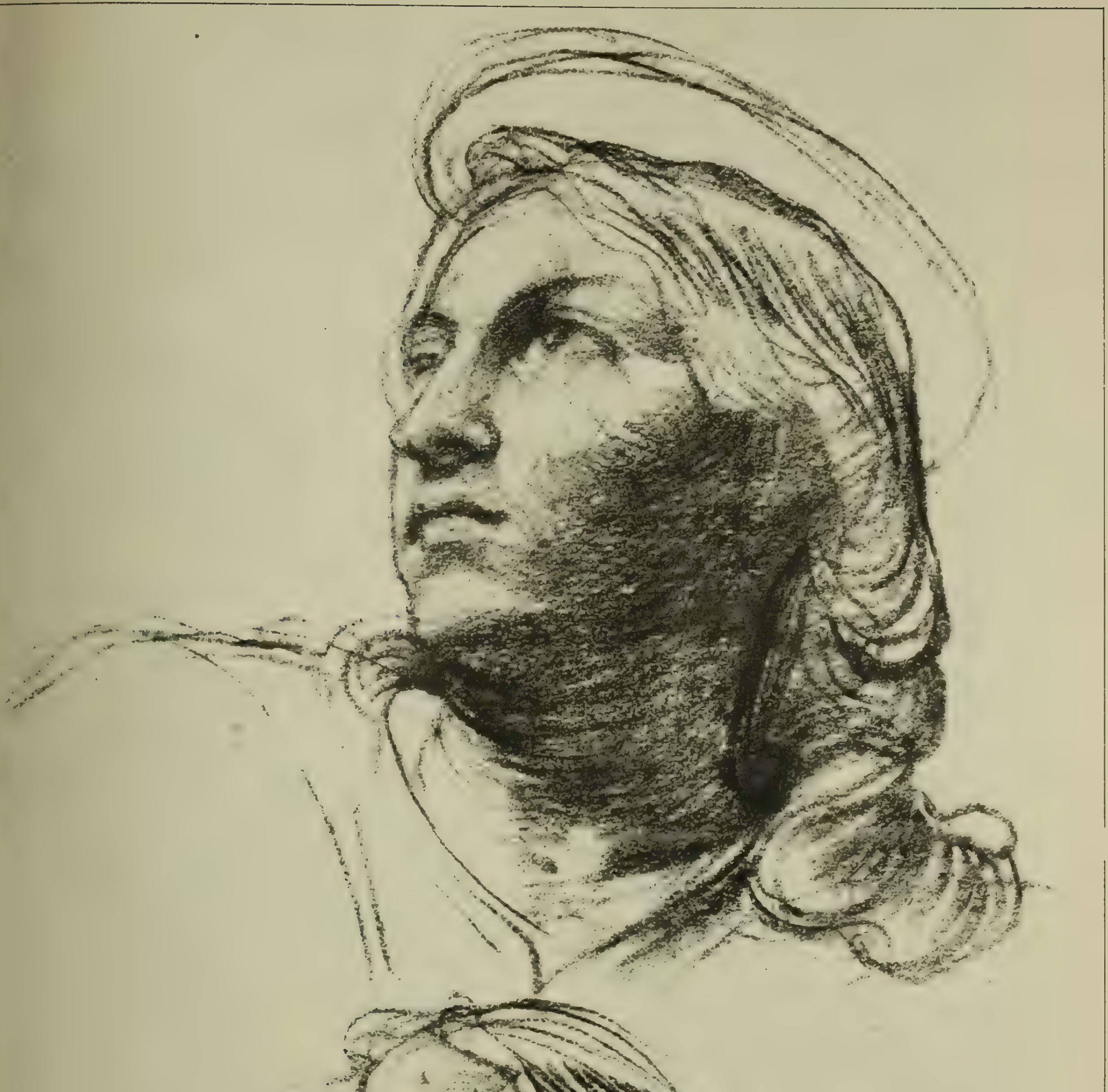
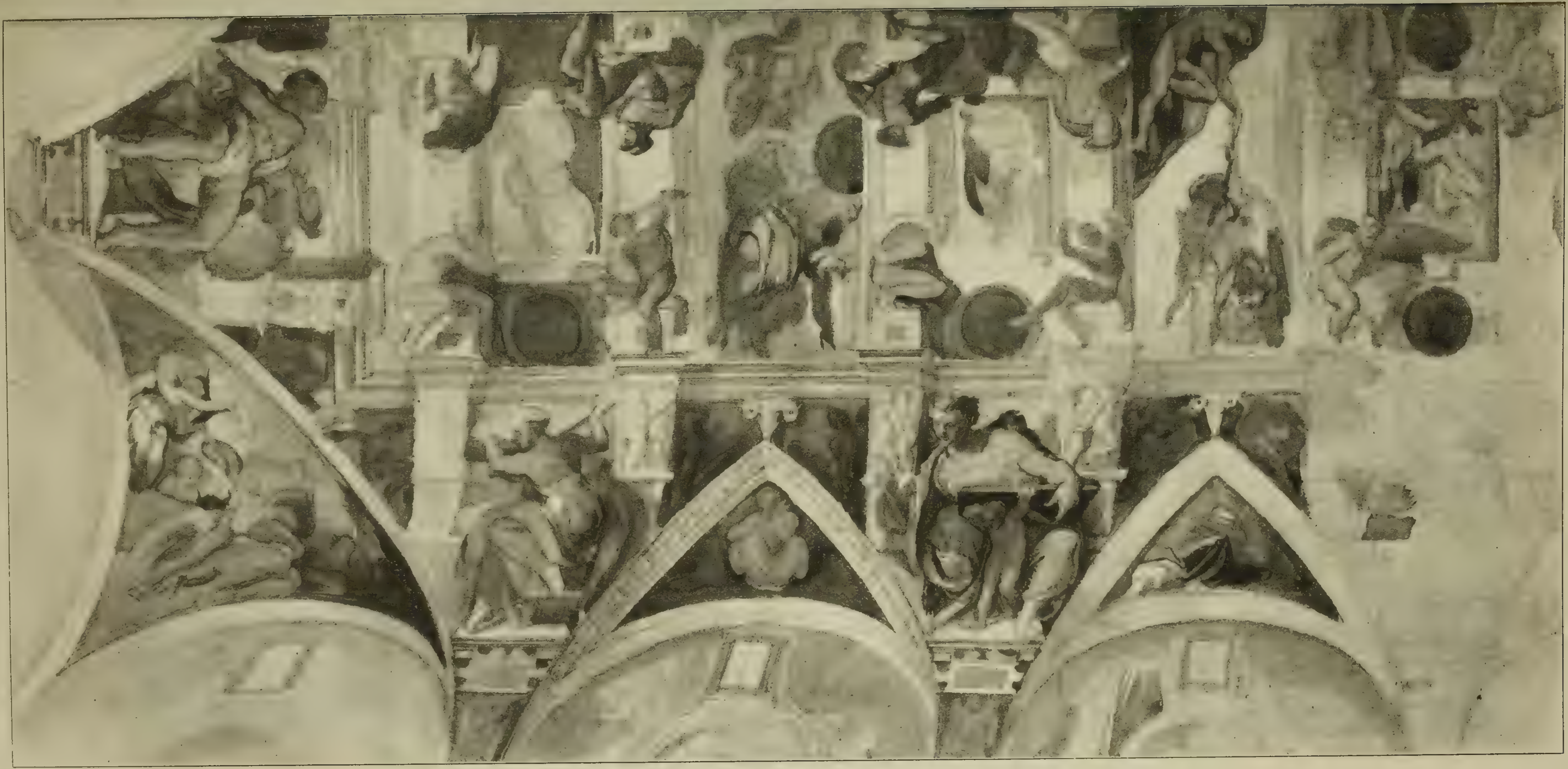
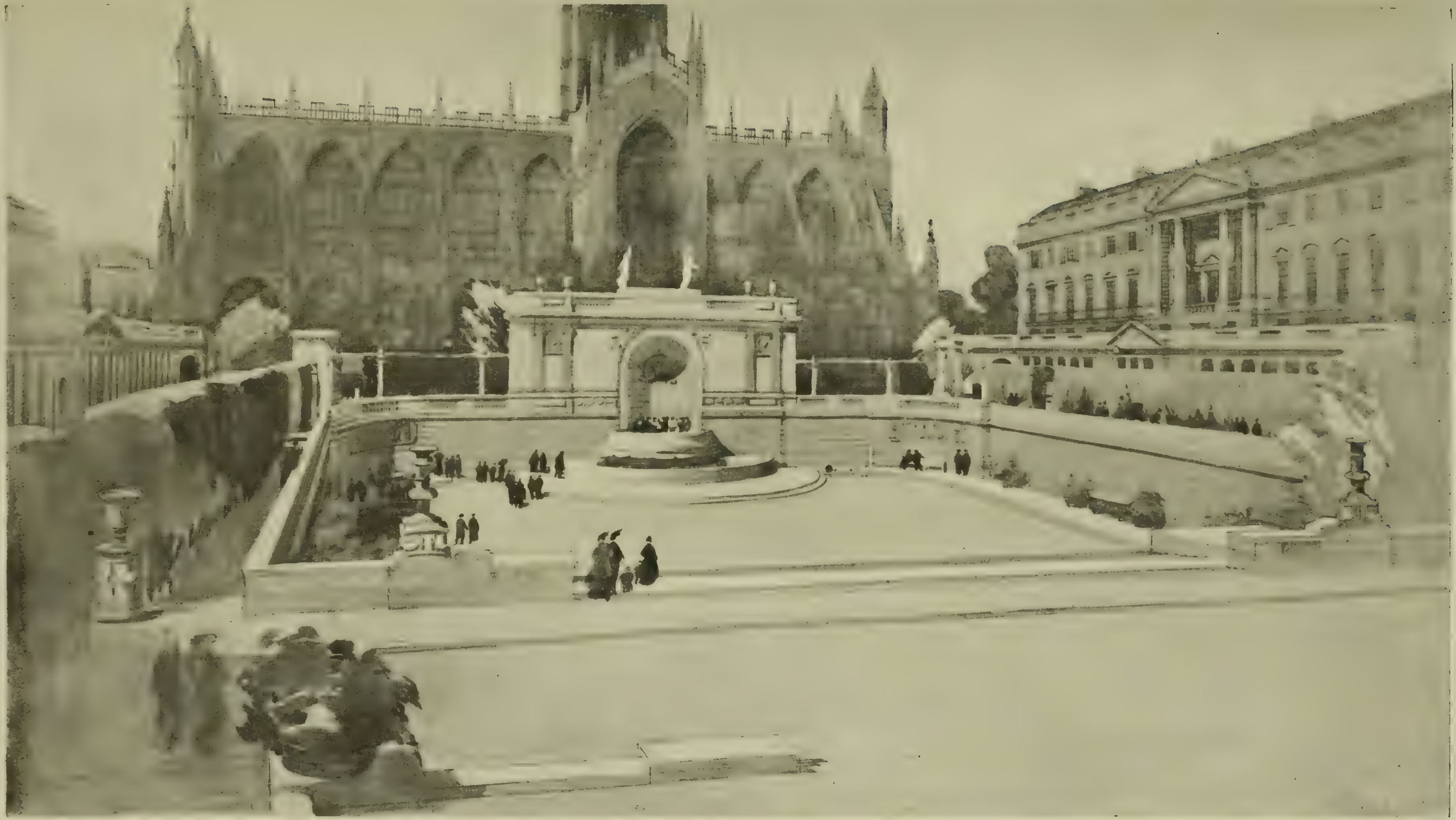


STUDY OF HEADS.—From a Drawing by Alfred Stevens.

Photo: Arthur P. Monger.



DESIGN FOR DECORATION OF A VAULT.—FROM A DRAWING BY ALFRED STEVENS.



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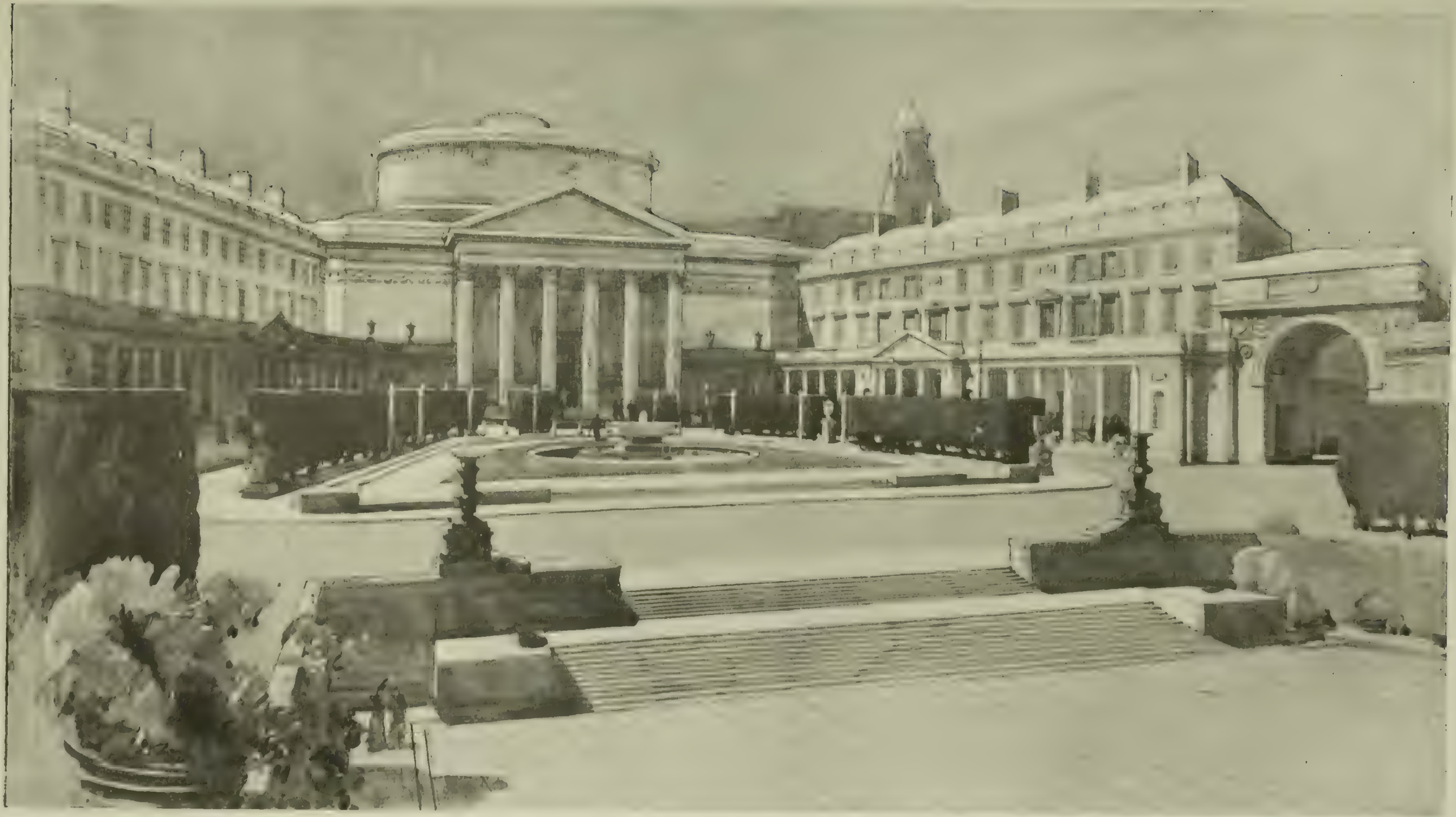

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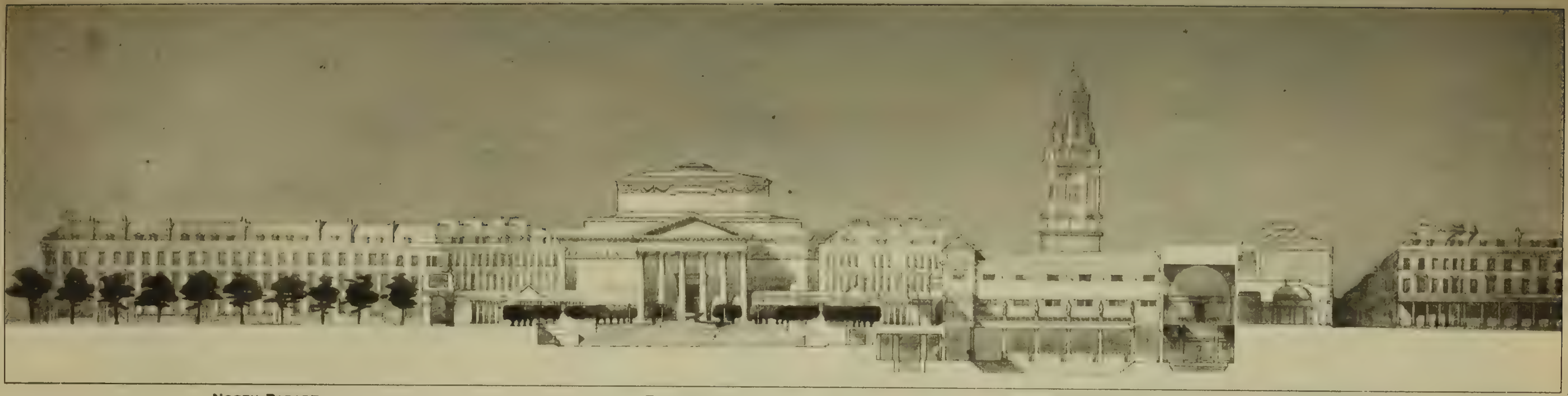
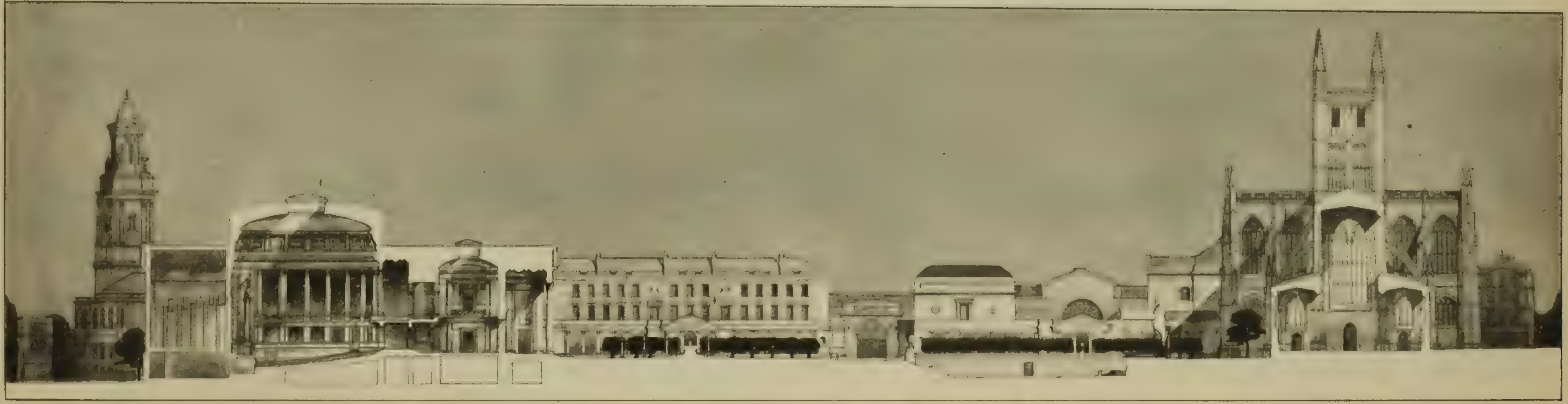


Section from East to West, looking South.



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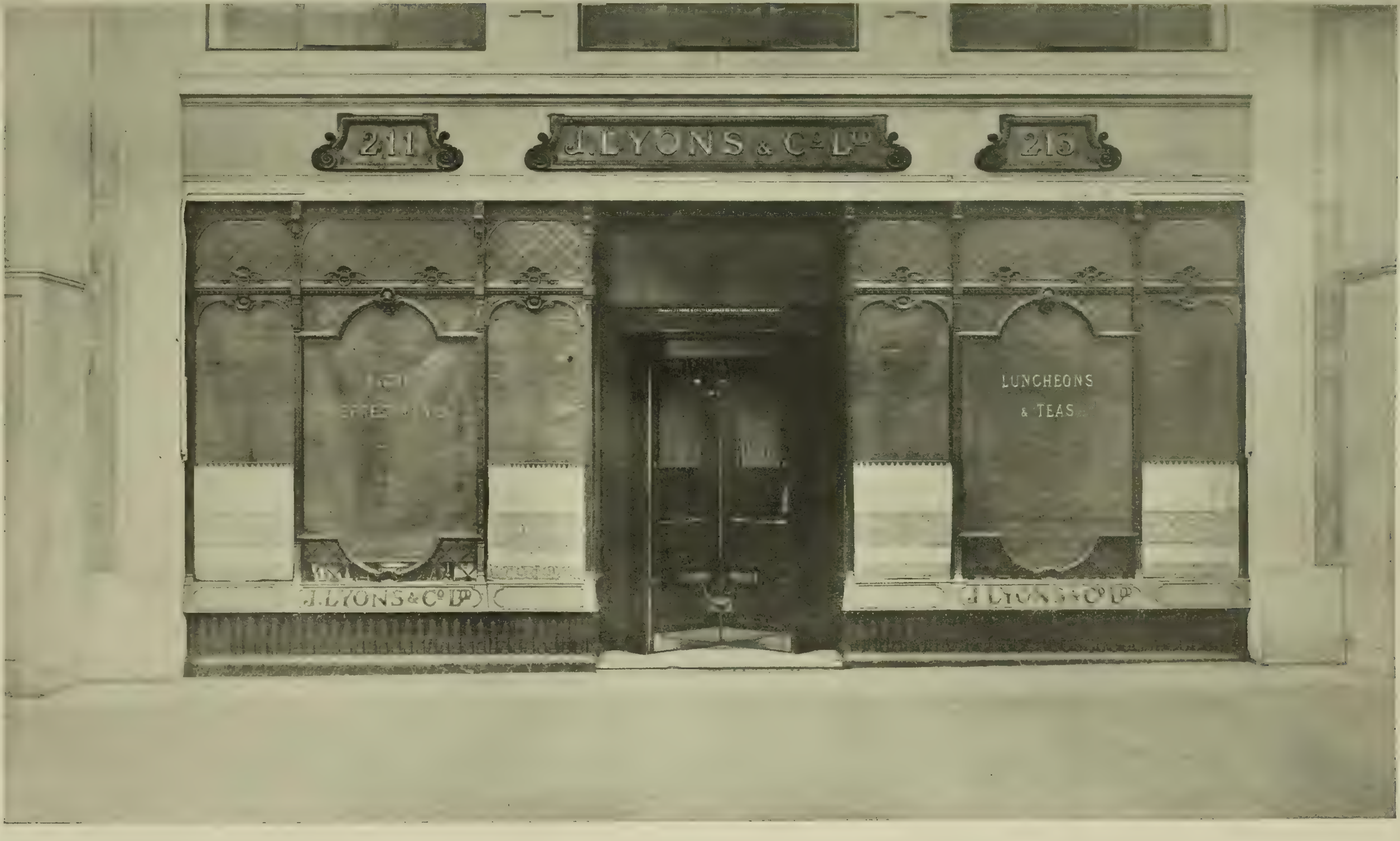

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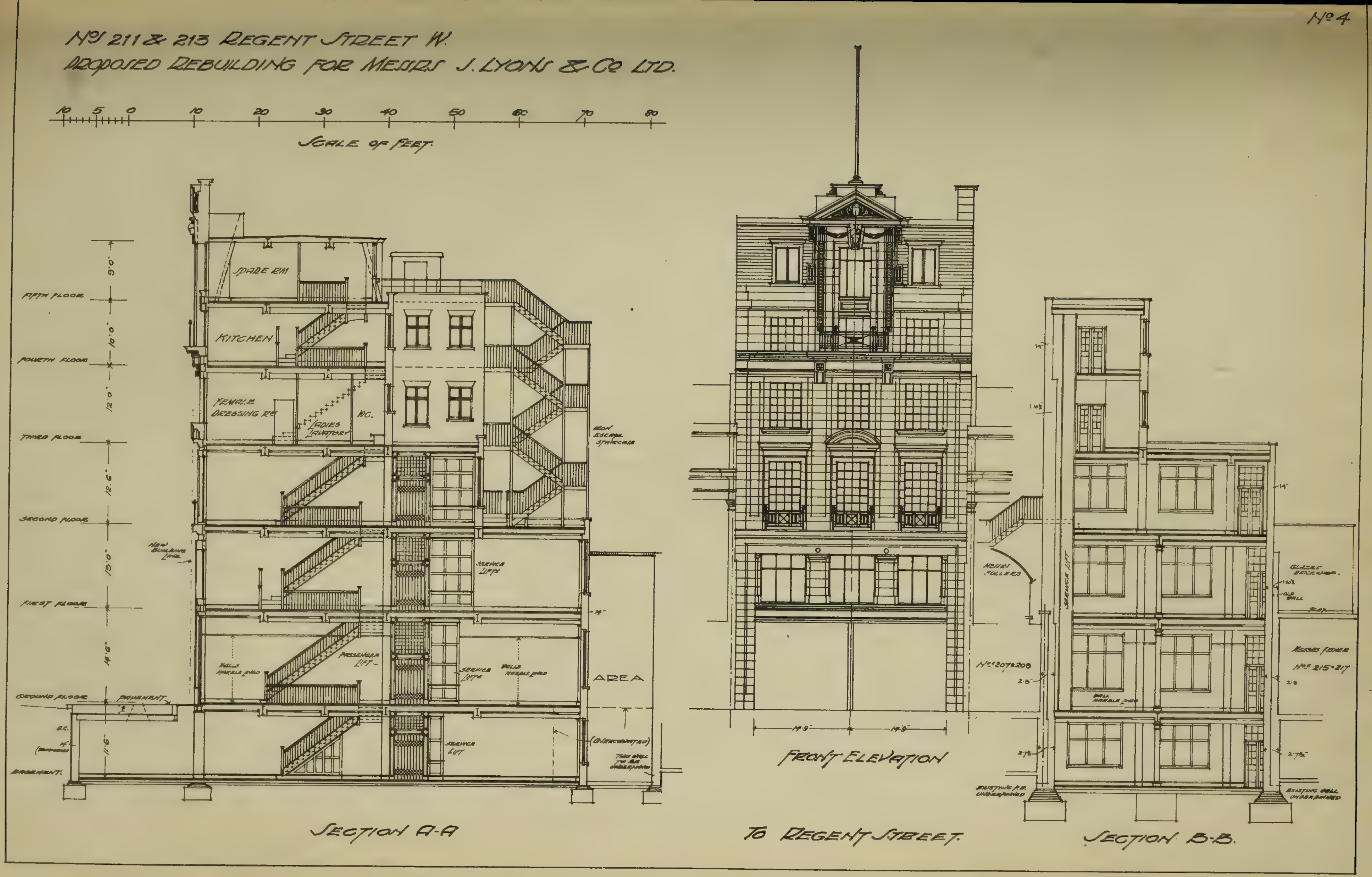

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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

OL. CX.—No. 3817. MARCH 31, 1916.

THE CITY COMPANIES.

THE origin of trade guilds dates from ancient times, and they have played no small part in the history of every European country as well as those of the Far East. The voluntary association of men of the same calling for the promotion of mon interests, for protection, and for the advancement of rafts was a vital matter in days when law was imperfectly inistered and when education was difficult to attain.

eader Scott, in his fascinating book, the "Cathedral ders," builds up a very plausible theory in support of the mption that the greatness of the mediæval architectural h in Europe was the result of the activity of the Comacine d of Master Masons, whose origin he traces back to the of ancient Rome; while tradition may link it up with the rior age in which Solomon built his Temple and with the tic order of Freemasons. The exact amount of truth and on on which learned theories of the subject are based t ever be a fertile ground for discussion and debate; but certain that from the early days of recorded history in and other lands the activities of the trade guilds ed an important element in our national life, and each of City Companies is a living strand connecting the present with the past. The growth and prosperity of London were d and increased by the activities of the guilds, to each of h important functions and duties were relegated, and the that they acquired wealth and influence and were ointed to administer bequests of property and money is a of the estimation in which they were regarded by our fathers.

The City guilds are divisible into two classes—those which rolled and largely directed commercial enterprise, such as Mercers, with the closely-allied associations of the Merchants he Staple and Merchant Adventurers, the Grocers, who d for centuries as public weighers for the Port of don, and also the associations which were more purely t guilds, like the Armourers and Braziers, the Goldsmiths, ksmiths, Carpenters, Joiners, Masons, Painters, Plumbers, Glaziers. In many instances the functions originally fulfilled the guilds have become obsolete, as is the case with the llers and Armourers, and such Companies have become ensers of educational and other benefits for the general ice of the community. In the case of the Barbers, whose tions up to the year 1745 included surgery, the scope of Company's activities have become altered by subdivision the formation of later associations. By similar processes paration was made between the Mercers and Haberdashers, Grocers and Apothecaries. Other of the Companies, such he Fishmongers, became divided into two Companies, which sequently were united again into one body.

The craft guilds sought to obtain as far as possible a nopoly of their crafts, excluding all who had not been nally admitted to them through the gate of a recognised renticeship, and they were assisted by law and common tom in maintaining such privileges. Thus we find the penters at dispute from time to time with the newer body oiners as to the limitations of their crafts, and their rights punishment against those who transgressed the rules laid n for the proper regulation of the various trades were n exercised.

In this respect the craft guilds resembled trade unions, but y combined with a sense of their rights and privileges a n determination to advance craftsmanship and technical wledge, their desire being to increase the importance of h craft to the body politic by maintaining a high standard of excellence, and insisting among themselves that their members should be what they professed to be—master craftsmen. They promoted the real dignity of labour by showing that the best results could alone be attained by practical technical skill—a result brought about by intelligent and well-directed work and not by agitation. Nor did they, like the unions, seek to regulate the rate of wages paid in their crafts.

The guilds are first mentioned in the reign of Henry I., though their history must extend to a much earlier date. Originally they had no official position, but were tolerated on the payment of an annual rent or "ferm" to the Crown. The oldest charter of incorporation given to any Company is that granted by Henry II. to the weavers, confirming privileges granted to them in the time of his grandfather in consideration of a yearly payment of two marks of gold. Practically all the guilds in the early period of their existence formed fraternities in connection with some religious body, and religious observances were closely associated with their history. It was, among other duties, an obligation laid on them to attend the funerals of members of their guilds and to maintain their own poor.

After their incorporation in the form of companies they gradually acquired lands and property, interesting themselves in the provision of means of education and building halls in which to meet and transact business. There are three degrees of members of a City Company—the possession of the Freedom, membership of what is called the Livery, and a position on the Governing Body entitled the Court of Assistants. The Liverymen of the companies become the electors of the Lord Mayor of the City Corporation and most of the officials of that body, proposing to the Court of Aldermen two aldermen, one of whom is chosen Lord Mayor by vote, and until the Reform Act of 1832 they had the exclusive right to vote in Parliamentary elections. Thus the association between the City and the City Companies has been a very close one, and, until the enormous growth of Outer London occurred during the last 150 years, the City of London constituted the metropolis, whose voice had such weight in all epochs of our national history. The espousal of the cause of popular liberties by the capital made the cause of those liberties prevail

The Government of England, under our earlier kings, frequently had recourse to the Companies when in need of money for the prosecution of foreign wars, and the abuse of the custom under the Tudors and Stuarts led to many grievous exactions by which the revenues of the Companies were sorely strained, these exactions reaching their climax in the reign of Charles II. That sovereign issued a writ of *quo warranto* in 1684 against all the Companies, which gave the Crown arbitrary and unconstitutional rights over their management and revenues, which was annulled and reversed in the reign of William III. The destruction caused by the Great Fire almost ruined many of the Companies, and it was only by prudence and effort that they were in time able to recover from the great financial loss which they had sustained. In 1880 it was estimated that the trust and corporate property of the Companies was between £750,000 and £800,000, of which sum about £200,000 was trust and the remainder corporate property. The trust property of the Company supports over 1,000 charities, and when an inquiry was held in 1882-83 it was stated that no charities were better administered.

Something like forty schools, many of them of the first importance, are also wholly or partially supported by the Companies, as well as the City and Guilds Institute at South Kensington and numerous scholarships at Oxford, Cambridge, and the newer universities. A great part of the income devoted to these and other purposes consists of contributions from the corporate funds of the Companies; in other words, from funds to the free use of which they have the same rights as that of a holder of private property, so that the effect of the Companies' activities is that large sums of money which would have to be raised by the community is saved to it by the voluntary action of these bodies.

As English law represents codified custom, and is slowly changed and altered from century to century by the recognition of the needs of the community, so the trade guilds, as represented by the City Companies, have become bodies carrying out their original purposes in ways suited to modern conditions, and it is more than possible that they may attain a greater position of authority in connection with the crafts they represent than they at present hold. The history of Japan furnishes such a parallel in the manner in which the Mikado once more became the real instead of the titular head of the State—by adapting his Government to modern conditions, and it may be that the City Companies will in the future obtain some of the authority which is now exercised by the trade unions, whose activities have in many respects failed by being political rather than technical.

It is interesting to note a few of the privileges and powers conferred on the Companies or at present exercised by them. The Fishmongers, relying on their charters, pay "fish meters," who attend Billingsgate Market, examine the fish there, and condemn any that is unsound. The Goldsmiths were until recently empowered to assay and mark plate, and to prosecute those selling it if under standard or forging marks. The freemen of the Vintners, by patrimony or apprenticeship, and their widows enjoy by custom the right to sell wine without licence on certain highways. The Vintners' and Dyers' Companies, together with the Crown, are joint protectors of the swans on the Thames. The Apothecaries have the rig to examine candidates who wish to practise as apothecarie and to recover penalties from those doing so without licenc The Founders' Company stamps weights under the provisio of several Acts of Parliament; the Gunmakers have powe to enforce the proving and marking of guns and pistols; t Scriveners conduct an examination for admission to the offi of notary, and can prevent anyone from practising who h not passed such an examination; and the Stationers ha kept a register of all publications since 1557, which is regard as legal evidence under the Copyright Act of 1842.

The Fire unfortunately cut the thread of the historic record of the Companies as far as it is architecturally express in their Livery Halls, which, with the exception of a fe fragments, date from the time of Charles II., and in many cas the immense pecuniary loss occasioned by "that dreadfu conflagration," as it was fittingly called, prevented t Companies from erecting buildings commensurate with the historical importance and influence. Like the churches London, they rose again from their ashes; like them the frequently show traces of the privation in which London w reborn. The later additions which have been made are n always in the best architectural taste, but they are an expressio of the æsthetic attitude of their day, and as such have a value.

We shall describe the twelve great Companies in the order of precedence, an order rigidly observed, though it do not necessarily depend on wealth or antiquity, and afterwar we shall hope to deal with the remaining Companies, many which possess halls of great architectural merit and all them buildings of interest from their historical and technic associations, for in the new England which will emerge fro the mists of war the City Companies have, we doubt not, great part to fill.

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NOTES.

Testimonies of Study at the R.I.B.A.

The current exhibition of Testimonies of Study now on view in the Common Room at the Institute shows the inevitable effects of the war. It is not particularly interesting, nor does it contain any work of so high a standard as some of the designs in previous exhibitions. But, as we have remarked before, the interest of these exhibitions would be considerably enhanced if marks were placed on the drawings showing those which were approved by the examiners and those which were rejected. The advantages of this suggestion appear to us to be obvious, and the only drawback we can imagine is that it might be thought somewhat unkind to draw public attention to those who had failed. But this difficulty might be avoided by placing the signatures of the students on the backs of the drawings instead of on the face, or, if preferred, those designs which failed could be taken down and the exhibition be confined to the successful ones. This, at any rate, would improve the standard of the exhibition. We suppose the Board of Examiners is the responsible authority, and we hope they will give this suggestion their kindly consideration.

Carpenters' Hall Lectures.

Mr. H. Hughes-Stanton, A.R.A., R.W.S., gave a very interesting lecture at Carpenters' Hall on Wednesday, March 22, on "Landscape Painting," in which he described the historical sequence of the various schools of landscape painters and the growth of the art from its tentative beginning in the form of backgrounds in the early Florentine figure pictures; but it was not, he said, until the Dutch specialised and the easel picture was encouraged that real landscape art arose. Landscape art being comparatively new, there is in it more room for progress than in other branches of painting, and effects of light and shade are now better understood and represented than they were formerly. We are too ready to accept fully-established art, which is why painters who have been dead for years are often considered great, while modern painters are undervalued. The Italian school produced no real landscape painters except Canaletto and Guardi, who devoted themselves to architectural subjects. The Flemish school gave the art new impetus, but Rubens may be considered as the first real painter of pure landscape. Claude Lorraine made himself an immortal name in France, and his art is based on classic feeling and a love for the great and lofty beauty of nature. The landscape school which arose in Holland in the seventeenth century carried the branch nearer to a true representation of nature. Its great charm is that in it nature was painted without any preconceived idea of making elaborate compositions; it is in the work of the Utrecht school that it finds its best and most complete expressio Van Goyen, the pupil of Van de Velde, may be considered to be th first of the great landscape painters. The lecturer reviewed the wor of the Ruysdaels which lead up to that of Hobbema who, though prize as the greatest Dutch landscape painter, owed his position to th fact that his work was lost in obscurity until rediscovered by appr ciative amateurs. The work of Albert Cuyp shows a first attem to obtain more truthful colouring. Rembrandt's contribution to th art was reviewed, while afterwards an interesting sketch was given English art as illustrated by Chrome, Cotman, Turner, and Constabl and a sketch of the development of the modern French scho followed. In conclusion, Mr. Stanton said that the work of man artists recently deceased have found places among the immortal instancing the work of the brothers Maris and Mauve in Holland an Boudin and Gazin in France, while in this country Cecil Lawson ha found a very high place. We think the lecturer was justified i claiming at the end of an admirable lecture that there are man living who are as sincere as any of the artists of the past, and wi leave the world a legacy of talent which will at a later date b appreciated at its true value.

"New" and "Temporary" Structures.

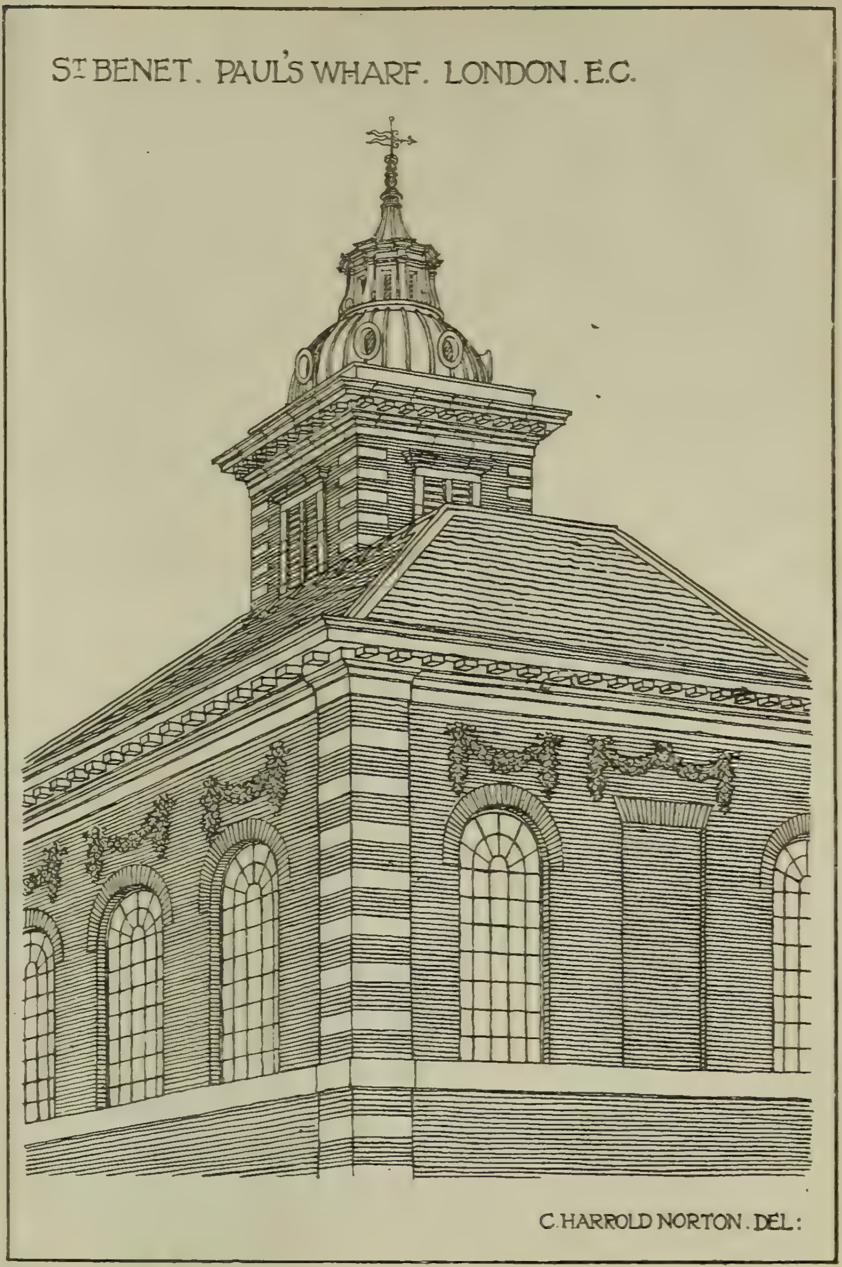
In our Law Reports will be found a report of th case Andrews *v.* Wirral Rural District Council, th facts of which are somewhat unusual, as will b n by a reference to the report. We only refe to the case here to draw attention to the point law decided by the Court of Appeal. The Council having pulle down the erection in question, were sued by the owner, who claime damages for its wrongful seizure and destruction. As a ne "building" the Council would have been entitled to pull down th structure under their by-laws made under the Public Health Act 1875, if it had been erected in violation of their by-laws, but thi defence was held both by the court below and the Court of Appea not to be open to them because they failed to show that notice ha been given to the plaintiff calling upon him to show cause under th by-law. The Council had, however, in their district adopted th Public Health Acts Amendment Act, 1907, and the Court of Appea held that the action of the Council could be justified under sect. 2 of this Act, which relates to "temporary buildings" which hav been erected without the approval, or not in conformity with th approval, of the local authority, and under which section the loca authority has powers to pull down and remove such structures. Th court below had held that a structure could not at the same tim be both a "new building" within the Public Health Act, 1875, and "temporaary building" under the Public Health Acts Amendmen Act, 1907, and the important point in the case is the decision of th Court of Appeal that a structure may answer both descriptions an be dealt with under either Act.

E LONDON CHURCHES F WREN AND LATER RCHITECTS OF THE ENAISSANCE.

o. XXIII.—St. Benet, Paul's Wharf.

church of St. Benet, Paul's Wharf, is now parochial, being devoted to services for elsh in London. The old church, de- in the Great Fire, was the burial place igo Jones, who was commemorated by ble monument which perished with the . The new church, which was built in served also for the parish of St. Peter, Wharf, the church of which was not . St. Benet is half hidden by houses Queen Victoria-street, only the tower and of the church being visible from that ghfare. A flight of steps leads down to wer level of Upper Thames-street, the entrance to the church being through the esque tower at the western end.

s one of the quaintest and most homely en's churches, suggesting the type of design ved in Chelsea Hospital rather than the ambitious rendering of some of the larger hes, and the same simplicity obtains ally and externally. The interior of the consists of a nave divided from the aisle on the northern side by two hian columns; there is a north gallery, smaller western gallery which contains gan. It is among the smallest of Wren's hes, and possibly one of the most sting from its unusual picturesqueness reedom in treatment.


ST BENET. PAUL'S WHARF. LONDON. E.C.
C. HARROLD NORTON. DEL:

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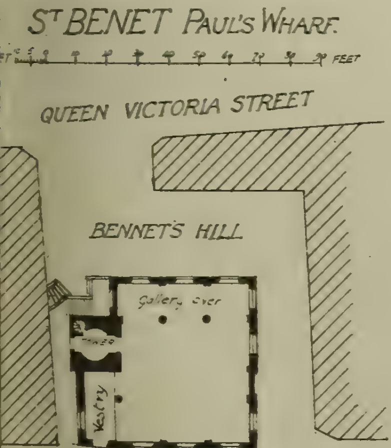
DWICK PUBLIC LECTURES, 1916:

CTURE II.—WATER SUPPLY AND DRAINAGE.

TINUING the series of lectures by Dr. es Porter, Medical Officer of Health, arylebone, at the Household and Social e Department, King's College for Women, den Hill-road, on Wednesday, March 22, The Arterial System of the House," the er devoted a considerable amount of time dicating the various defects that might in relation to the drainage system and the ge that might ensue as a result. Many of defects were caused by neglect, and many em were of so simple a nature that the holder could quite easily deal with them. appliances within the house and those ded for collecting and carrying off rain- were under the eye of the householder, because they were not looked at intelli- y, were not looked after properly, and ently were the source of dampness and troubles. With regard to the under- d drainage, he indicated that, though it be seriously out of order, no signs might iven. A defective drain was always a potential source of danger, and those who fussed about their drains, had them examined and cleaned and tested regularly, were perfectly justified. Certain of the tests were described and various appliances that might be used in remedying minor defects were demonstrated.



produced from the Ordnance Survey Plan, with the sanction of the Controller of H M. Stationery Office.)

The latter part of the lecture was devoted to a consideration of that portion of the arterial system connected with the supply of water, hot and cold. In indicating the main requirements of water companies in relation to water pipes and fittings, he drew attention to the fact that the chief responsibility for maintaining the purity of the water within the dwelling rested upon the householder. The Health authorities were given comparatively little power to deal with it. They asked little more than that the storage cistern should be kept covered and clean, while the water companies insisted chiefly that there should be no waste. The lecturer, while recommending regular cleansing of the cistern, advised that in every house there should be at least one tap drawing water direct from the main for drinking purposes. He expressed the view that in London and the larger centres there was no real necessity for domestic filtration of water. He showed a number of water fittings and described their structure and the defects that might arise in connection with them. In regard to hot water supply, he pointed out that, small as were the powers of the health authorities in relation to cold water, in respect of hot water they were much less. Entire dependence must be placed on those who fitted the system and the amount of care expended upon it by the householder. The different systems in common use were described, and particular attention directed to the various apparatus introduced with the object of getting rid of the necessity for depending upon the highly uneconomical kitchen range and boiler as the source of hot water for bath and other purposes.

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THE SURVEYORS' INSTITUTION.

The Council of the Surveyors' Institution has set up two strong committees to consider the problems likely to arise at the termination of the war, more particularly in connection with possible unemployment on the disbandment of the army and munition workers; and dealing with the question in the light of the special knowledge possessed by surveyors as distinct from other professional men or from the representatives of trade and industry, to suggest preventive or curative schemes. One committee will deal with the subject from the urban standpoint, and the other from that of the rural and agricultural districts; but arrangements have been made by which they will act together, either as a single committee or by means of joint sub-committees, where matters of general principle are involved.

SURVEYING, PAST AND PRESENT.

A Chadwick Lecture was delivered at the Royal Society of Arts on Monday afternoon by Mr. E. A. Reeves, F.R.A.S., F.R.G.S., whose subject was "Surveying, Past and Present." The lecturer devoted himself to the history of surveying, beginning with the voyage of Pytheas from Marseilles, round the coast of Spain and France to Holland and England, the maps of which, as drawn by him, were correct in some respects, but very inaccurate in others. The first recorded geodetic survey was made in the fourteenth century by measuring the difference in the angles of the shadow cast by the gnomon taken at Alexandria and Assouan, which were assumed to be on the same meridian, but are not, and multiplying the distance apart of the two places by the proportion between the angle differences, and thus obtaining the circumference of the earth.

The lecturer showed Ribero's map of Africa, 1529, and some Ptolemy maps, one of which, 1472, showed a large projection east of England which seemed to be Scotland twisted round. This was corrected in the edition of 1513. The first authentic map appeared late in the thirteenth century. The ancient instruments were then described, the principal one being the Astrograph, B.C. 150. This was retained in its original form until the Portuguese in the fifteenth century completely redesigned it. They also devised the Instrument in Parallaticum for taking altitudes.

Vasco di Gama did some original work, and in calculating latitudes seems to have been very nearly accurate. The lecturer had himself experimented with rough instruments and discovered that it was quite possible to reduce errors within five to seven minutes. The cross staff was invented in 1532, and used by John Davis in his work. The magnetic compass is known to have been used for measurement in the Mediterranean from the twelfth and thirteenth centuries, but not for land until the sixteenth. But it is to Philip Snell, of the Netherlands, in the seventeenth century that we owe the greatest advance, for he it was who first triangulated the ground and measured the base and containing angles to get his long measurements. This system has prevailed ever since, and has been adopted for all our Ordnance surveys and every important survey.

It is very interesting to notice how the old surveyors, while feeling their way in these difficult fields of research, often made guesses with no scientific basis which brought them very near the actual truth.

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ARCHITECTURAL SOCIETIES.

Nottingham and Derby Architectural Society.

On March 14 the fifth meeting of the session was held at the School of Art, Nottingham, when the Vice-President, Mr. H. G. Watkins, F.R.I.B.A., delivered a lecture on "Lincoln City and Cathedral" before a large audience, which included lady friends of the students of the School of Art, who had been specially invited. The President, Mr. Harry Gill, M.S.A., briefly introduced the lecturer, and Mr. Watkins, who is a Lincoln man, then gave an interesting description of his native city. He first described and illustrated with lantern views the supposed position and arrangement of the city in the time of the Romans, and then rapidly described its progress and alterations in Norman and later periods up to the present time. Views of the principal historical buildings and remains of old Lincoln were shown, and a concise history and development of the cathedral, usually called "The Minster," was given. A number of very beautiful slides of the interior and exterior were put on the screen, and even the history of the Lincoln Imp and his photograph were included. The interesting corporation plate was also described.—At the close Mr. Valentine Vaerwyck, a Belgian architect at present resident in Nottingham, proposed a vote of thanks to the lecturer, which Mr. C. B. Sherwin, a former Hon. Secretary of the Derby Society, seconded. Mr. Watkins suitably replied and seconded a vote of thanks proposed by the President that the thanks of the Society be accorded the Chairman and members of the Committee of the School of Art and Mr. Harrison and the members of the School for so kindly placing the room and lantern at their disposal.

Architectural Association of Ireland.

A discussion meeting was held on the 23rd inst. at which members were invited to present any "fads" as to forms of construction in detail, not of the stereotyped or conventional character, but variations which were found to be satisfactory in practice. The members who took part illustrated their views by blackboard sketches, and a most instructive discussion was thus generated. The designs submitted by Dublin architects in the competition in connection with additions to Louth County Hall will be on view until April 1 at the Association Rooms.

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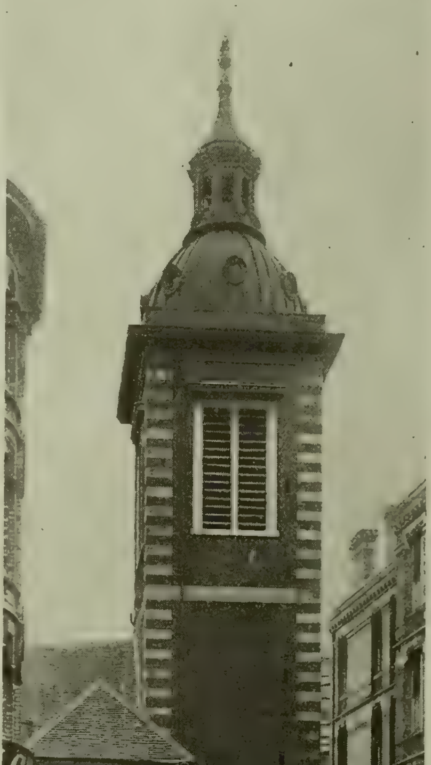
CORRESPONDENCE.

By-Laws and Building After the War.

Sir,—In connection with the very urgent need that will exist for the resuscitation of building activity when peace is declared, to which frequent allusion has been made, may I be allowed to invite attention to the restraining influence which the by-laws of many of the local authorities cannot fail to exercise upon such resuscitation?

The well-being of a very large proportion of the population being dependent upon tl activity of the building trade renders it esse tial to remove every possible hindrance to immediate and widespread revival.



[Photo.: Geo. Trotman.

Wren's Churches: St. Benet. (*See page* 245.)

In the early Victorian days a demand aro for what the house agents now mouthing describe as rooms of "lofty elevation," an anyone questioning the justification for th so-called sanitary reformation was deeme hopelessly depraved.

The "hopelessly depraved" contended th the lofty room was difficult to heat, and for th reason its windows were rarely opened, whi low rooms ensured frequent if not consta open windows. Time rolled on, and wh does Suburbia now think of its lofty rooms?

In reply to my inquiry regarding the heig of rooms prescribed by the local authoriti the Local Government Board stated "th they are not aware that any return has be published showing the heights of rooms pr scribed by the by-laws of those local authoriti in England and Wales who have made by-lav on the subject.

The Board are aware that at one time number of local authorities were advised that requirement of a minimum height of 9 ft. w suitable for habitable rooms generally.

They have themselves been advised in mo recent years that 8 ft. may ordinarily be co sidered sufficient for enforcement und penalties; and this is the only standard whic has been specified in their model by-laws. Th have, however, been advised further that some localities where markedly urban co ditions prevail it may not be unreasonab to require a greater height, and therefore, wh it is their invariable practice to suggest a heig of 8 ft. to local authorities proposing to mal by-laws on the subject, they have in a fe instances felt that they would not be justifi in pressing that figure on local authorities who own advisers considered it inadequate for loc needs."

I should occupy too much of your space we I to demonstrate the absurdity of many of th existing local by-laws, but I ask to be allowe to give one illustration. An attic can generall be made to conform to the local regulation b converting that part of it which has a slopi roof into cupboards, thus reducing by possibl one-half the cubic contents of the room, and th really vital factor.

Matters of principle which would be dete mined by the imperial authority are left to th decision of local prejudice or ignorance. Th Local Government Board wastes time in givin advice which is not adopted, while th Imperial Parliament wrestles with som parochial problem with the merits of whic it is as conversant as with the geograph of the moon.

Has not decentralisation run mad?

W. Grey-Wilson.

Junior Carlton Club,
Pall Mall, S.W.

The Apprenticeship System.

Sir,—We are all agreed, I am sure, that th existing system is obsolete, and we woul welcome an alteration for the better; but, if w are to have any drastic changes, it will be mos useful to the reformers to receive opinion from all sides as to the reasons of failure o the present system.

My occupation is that of builder's foreman and, being a stonemason by trade, I will onl attempt to refer to this trade at present. have spent the greater part of my life on th very best work, both Classic and Gothic, an I can say with safety there is a great difficult in procuring masons who are thoroughl experienced in this class of work, where accurac and high finish are required.

The blame does not rest with them in ever case, as generally they take to this work wit enthusiasm when opportunity permits. O course, some are indifferent, but I think wher this is the case they have been apprentice to the wrong trade. Generally a lad doe not get any opportunity of selecting a trad upon which his future depends; he is as a rul put to the first trade which is open to hin that suits his parents' financial circumstances

If, as has been suggested in Mr. Costigan's letter, a partial training was commenced a ol, I believe it would do a great amount ood. A lad would be given some idea everal trades, and would have a better ce of choosing between them than at nt; he would also be taught the theoretical of his craft, which he seldom takes ntage of in our technical schools. Masons body do not realise the value of these ols.

e lack of opportunity to select a trade is eat drawback to a lad, as it often means misplaced for the whole of his life. I pleased to see that Mr. Stranks mentioned her serious point—that is, the difference e relationship between master and appren- In the old days they knew each other ately, and the employer took an interest e lad and personally tutored him; but in days of limited liability companies in cases we do not know who are our oyers.

nerally a lad is apprenticed after the of a month or so, during which time thing is strange and fascinating to him. s handed over to the foreman, who may ay not take an interest in him. If he does, ay possibly make him a competent banker n by the expiration of his time; but I end he should be taught to work hard and stone, fixing, and setting out. How often his done? Many firms turn lads away, their time is expired, who have worked ne kind of stone only, and, what is worse, hown by their own actions, by offering lower wages than the current rate, they not taught them that one branch properly five years' apprenticeship.

is generally accepted by masons that a as to knock about, as they call it, to make elf efficient, but I do not think this should ecessary to a lad apprenticed in a large .

hat I feel sure would be beneficial is some of supervision over the employer. For nce, I would suggest that every lad be ined periodically by competent people. is not progressing satisfactorily, and the oyer cannot give sufficient reason for backwardness, he should be transferred where.

a foreman looks after a lad properly it take up a lot of his time during working s, when he can ill spare it. I would suggest when a lad has completed his time, if he icient, and the employer has done well out im, he should receive a bonus out of the ium, and so should the responsible person has had charge of him, as an incentive oth of them to do their best. The employer ves the whole of it at present for doing ing; only in very rare instances could he ney teach the lad a trade, and in almost case a lad earns his money after the first months; at the end of the second year, I ure to say, if he is in proper hands and ted to the trade, he has earned much than he has received, even if he gets very al wages, and the material he spoils is a gible quantity. The last three years he earn more still in proportion to his wages; act the last year he should not be very behind the journeyman.

ere is a danger of a lad being kept on which he pays best on, however good or he is at his trade. A foreman has to get out at cutting prices, and in some cases ves commission on profits; apprentices be used unfairly where this occurs by g so treated, and so be unable to make the ress they should. This could be safeguarded nst by the periodical examinations I have dy suggested.

vas also pleased to see Mr. Stranks's reference e apprentice clauses in local rules,* and hope will be continued, as it would be disastrous he lad's future if an unlimited number of entices were turned out. What would he use of their knowledge if there was no and for their labour? This is a point h must not be overlooked, as, although e is a bigger demand for masonry to-day ever, less masons are employed. The nt of machinery and the revival of Classical itecture were responsible for this, and as hinery is further developed so labour must till further displaced.

After the depression of a few years since, when some of the best masons in London and elsewhere sold their homes and suffered privations, which they do not know how they survived, is it to be wondered at that they do not put their sons to the trade? Also competition is keener amongst contractors, which is bound to lower the standard of work. Masons who are old enough to have sons commencing work remember the time when they could take more pride in their work than they are generally allowed to now. The demand to-day is quantity rather than quality.

J. RUSSELL.

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LAW REPORTS.

COURT OF APPEAL.

(Before the LORD CHIEF JUSTICE, Lord Justice WARRINGTON, and Mr. Justice SCRUTTON.)

Van as Dwelling-House and Bungalow: Andrews *v.* The Wirral District Council.

THIS case was heard on the 17th inst. upon the defendants' appeal from a judgment of Mr. Justice Atkin at the Liverpool Assizes in favour of the plaintiff for £20 for damage caused to an alleged bungalow erected at Moreton, Cheshire, of which the plaintiff was the owner, and also for trespass.

Mr. Rigby Swift, K.C., and Mr. Greaves Lord appeared for the appellant Council and the Surveyor, Mr. W. Webb Shenman, who was also a defendant; and Mr. Greer, K.C., and Mr. MacKasky for the respondent (the plaintiff).

Mr. Rigby Swift said the action was originally brought by Mr. Arthur Andrews against the Council and their Surveyor to recover damages for the removal of and the breaking up of a certain van belonging to Mr. Andrews on January 19, 1915. What Mr. Andrews called a van was really a building which had been removed as being in contravention of the by-laws, and which the Council were entitled to remove. Mr. Justice Atkin held that this erection was, in fact, a building within the meaning of the statute and by-laws, that the by-law in question was good, and that no needless damage was committed; but he went on to find that what had been done could only be justified under the by-laws, and that the Council had failed to give the notice required by the by-law before proceeding with the work of demolition, and that they were therefore liable for trespass, and he gave judgment for Mr. Andrews, the plaintiff, for £20.

The facts were these: Before 1914 a number of persons erected bungalows in various fields in Moreton for summer residences. The Council foresaw that these might cause a nuisance in certain circumstances, but they did not wish them to be removed at the time. Consequently they entered into an agreement with the owners of the land that they would not erect any more on the land, and would remove those already up if required to do so. As time went on the Council found they were becoming a nuisance, and, as some owners refused to remove the bungalows, an action was brought against them, which was tried before Mr. Justice Lush at Liverpool in 1914. His Lordship came to the conclusion that at that time no nuisance had been proved to exist, though it might; but he held that the agreement was void because it allowed the owners to do something in breach of the by-laws, and was therefore illegal. As a result the Council had to deal with each bungalow. The bungalow in question was erected in panels in Liverpool, and taken to Moreton and erected. His contention was that this was a temporary building, and should be so dealt with; but the other side did not admit it was a temporary building. Mr. W. R. Andrews, the then owner, was fined for not removing the bungalow in accordance with the request of the Council, and entered an appeal, but did not prosecute it. He then sold it to a Mr. Schofield, who was served with a notice to remove it. After this Mr. Schofield informed the Council that he had sold the bungalow to Mr. Arthur Andrews, a son of Mr. W. R. Andrews, who was a clerk in the employ of Mr. Schofield. In January, 1914, this gentleman was called upon to show cause why the bungalow should not be pulled down, and he attended the Council, who refused to allow the building, and then this gentleman put four wheels on the building and asserted that it was a van, and was therefore taken out of the by-laws. The building was removed by the Council, and Mr. Andrews brought the present action. Mr. Justice Atkin had found everything in the Council's favour except that the Council had not given Mr. W. R. Andrews notice. He (counsel) contended that there were admissions showing that Mr. W. R. Andrews had had notice, and, apart from this, he said it was a temporary building, which brought it within the Public Health Act Amendment Act, 1907, under which notice was not required to be given to Mr. W. R. Andrews, and that the building did not come under the Public Health Act, 1875, under which such a notice would be necessary. It was admitted that notice had been sent to Mr. W. R. Andrews by registered letter, but the learned Judge refused to accept secondary evidence of the contents of this letter, and that therefore the notice was not proved. He contended that the learned Judge was wrong.

Mr. Greer submitted that the judgment below was right on the grounds (1) that this was a new building within the terms of the Public Health Act, 1875; (2) that appellants had failed to prove their powers of demolition; (3) that they had no powers outside the by-law made under the Act of 1875, which by-law was bad; and (4) that the Acts of 1875 and 1907 must be read together, and once it was decided by the Judge that this was a new building under the former Act the 1907 Act did not apply.

The Lord Chief Justice, in giving judgment, said the learned Judge below was right in refusing to accept secondary evidence as to the notice to Mr. W. R. Andrews, but he was of opinion that the building in question was a temporary building, which came within the Amending Act of 1907, under which such notice was not required. He thought the Council were right in their action and the learned Judge below wrong upon this point, and his judgment must be reversed in favour of the appellants.

Lord Justice Warrington and Mr. Justice Scrutton also delivered judgment allowing the appeal, which was allowed, with costs.

(Before the MASTER OF THE ROLLS and Lords Justices PHILLIMORE and WARRINGTON.)

Allegation of Negligence against Civil Engineer. Successful Appeal: China Clay Corporation, Ltd. *v.* Worth.

THE hearing of this case concluded on the 9th inst., it being an appeal by the defendant, Mr. Richard Hansford Worth, a civil engineer, of George-street, Plymouth, from a judgment of Mr. Justice Scrutton in the King's Bench Division. (Reported in the *Builder* of May 21 and 28, 1915.)

The plaintiff Corporation was incorporated in January, 1910, to acquire leases and work clay properties near Harford, Devon, and they brought the action against Mr. Worth and a contractor of Plymouth, a Mr. William Caine Shaddock, to recover damages laid at between £10,000 and £11,000 for alleged breach of duty, breach of contract, and negligence in connection with the laying of a double line of 9-in. pipes about 3 miles in length from Redlake, Dartmoor, to Cantrell. They engaged Mr. Worth as the engineer, and under his advice and supervision Mr. Shaddock, as contractor, to construct the pipe line. There was to be a double line of pipes in a covered trench, and, it being of the greatest importance that the clay should be free from impurities, it was a term of the contract with Mr. Shaddock that the pipe line should be watertight, the pipe line being required to convey the china clay in solution from Dartmoor to Ivybridge, where the plaintiffs had railway sidings and tanks. Mr. Shaddock began his work in August, 1911, and in December, 1912, he was of opinion that he had practically completed it. But early in that month large quantities of water from the moor were found coming through the pipe line. Mr. Shaddock was called upon by Mr. Worth to make good the work under his obligation to make good any damage the works might sustain and maintain them in perfect repair for that month. He wrote letters which were interpreted as a refusal of this, and eventually the work was taken out of his hands. The plaintiffs then proceeded to have the trench reopened to ascertain the cause of the leakage A state of things was discovered which the experts interpreted in various ways.

Mr. Midgley Taylor, M.Inst.C.E., Westminster, said there were defects in the pipe line which, in his opinion, should never have occurred had the engineer exercised proper supervision of the work, and the presence of the clerk of the works would not absolve him from that responsibility. He also said that if there had been sufficiently frequent tests the quality of the work and the defects would have been revealed. Allegations were made that the leakages occurred through the pipes being improperly laid and the joints improperly caulked and bad cement used.

Mr. Worth's case, shortly, was that he had

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ee letter in our issue for February 25, p. 157.—ED.

paid visits to the works on an average about once a month, and that he had every confidence in the clerk of the works and the resident engineer, Mr. F. S. Gould, and also in the contractor, who was a man of good repute. He said that tests were made from time to time, and any defects were remedied. Moreover, the resident engineer had made monthly reports, in which he stated that regular tests were applied. Mr. Shaddock's case, shortly, was that he had had no proper plans to work from, and that a great deal of the trouble was caused by the storm water, and that the leakage was caused by the cracks in the manufacture of the pipes. Mr. Justice Scrutton, after a trial which lasted thirteen days, held that Mr. Shaddock had been guilty of breach of contract, and gave judgment against him for damages to be assessed by an Official Referee. His Lordship also came to the conclusion that Mr. Worth had not given that amount of intelligent supervision, particularly on the question of testing, which he should have given, and gave judgment against him, also for damages to be assessed by an Official Referee; but he directed that, if the plaintiffs recovered from the contractor, the damages, which were for the expenses of repairing and included loss of profit, the damages against Mr. Worth would only be nominal. Mr. Shaddock did not appeal from the judgment of the learned Judge. Mr. Worth's appeal was upon the grounds that the finding of the learned Judge, that he had been guilty of negligently supervising the work, was against the weight of the evidence, and that the Judge had misdirected himself.

At the conclusion of the arguments, the Master of the Rolls, in giving judgment, said Mr. Worth's duty to the plaintiffs was that he should do the work that was entrusted to him with reasonable care and skill, according to the custom of his profession. It was a term of the contract with the contractor that the pipe line should be made watertight, because the presence of peaty water in the pipe line, which was of great length, would discolour the china clay and make it less valuable in the market. Tenders were applied for, and plans were prepared by Mr. Worth as the engineer; the plans were approved, and the contract was made between the plaintiffs and Mr. Shaddock. Mr. Shaddock was a local man, and had a good reputation at Plymouth, and there was no doubt that the directors and Mr. Worth believed that Mr. Shaddock was a competent, respectable, and trustworthy man to undertake work of that kind. By the contract there was a positive obligation on Mr. Shaddock to make the pipe line watertight within a certain number of months, and to guarantee that for several months after completion. The works were begun in August, 1911, and previous to that the plaintiffs had, in August, 1910, appointed Mr. Gould the resident engineer for the whole undertaking, the pipe line, and the railway alongside the pipe line. It was obvious that for work of that kind, in which watertightness was so necessary, it was of the greatest importance, not merely for a resident engineer to be on the spot, but also that there should be a clerk of the works, and a Mr. Rowe was appointed to that position. Both those persons were regarded as competent persons, and, so far as Mr. Worth knew, they were proper persons to discharge the duties entrusted to them. There was no doubt that Mr. Rowe was a fit and proper person to be appointed clerk of the works for a pipe line. He was to be at the works all day and every day. It had appeared that Mr. Gould had spent the greater part of his time on the pipe line. The work went on until about the beginning of December, 1912, and then it was discovered that the pipe line, instead of being watertight, let a great volume of water down it. It was a regular stream of water. Mr. Shaddock was called upon to make it good. He denied his liability, and then the plaintiffs took upon themselves to make the work good and so minimise the damage caused by the breach of contract by Mr. Shaddock. The plaintiffs had some of the work reopened up and then serious defects were found in the joints connecting the pipes one with another. The plaintiffs subsequently became dissatisfied with Mr. Worth, and then they got the report of Mr. Midgley Taylor, and later the present action was brought against Mr. Shaddock and Mr. Worth. He had very great sympathy with the company in this case. The company required for the purpose of their undertaking a watertight pipe line, and they found that what they had got was almost a sieve. The company had a remedy, so far as Mr. Shaddock was concerned. But because the company could not get the fruits of their judgment against Mr. Shaddock that ought not to induce the Court, out of sympathy for the plaintiffs, to saddle Mr. Worth with liability unless he had been guilty of not exercising reasonable care and skill, and that omission was the cause of the damage the plaintiffs had suffered. The question was not whether more precautions ought not to have been taken and being wise after the event, but whether there was any actionable negligence. Mr. Justice Scrutton had relieved Mr. Worth from all responsibility on many of the allegations made against him; but he had found that Mr. Worth had not tested the pipe line sufficiently to see if it was watertight. His judgment was based upon the testing. What they had to ask themselves was what were the duties of an engineer in such a matter as this? They had had the evidence of the very highest men in the engineering profession, and they had given evidence which satisfied him of this, that when work was entrusted to a contractor and there was a resident engineer there, and also a clerk of the works, who devoted his whole time to the work, it was not the duty of the chief engineer to examine minutely the whole of the details of the work. He had the right to expect that the persons appointed by the building owner would do their work properly and report any defect in the work to him. Of course, if he had any ground for suspicion that the contractor was not doing the work he had contracted to do, then he must take upon himself to check the work and satisfy himself that the resident engineer and the clerk of the works had done their duty. The evidence satisfied him that that in substance was the duty of the chief engineer. He thought it would be wrong to say that Mr. Worth ought to be held liable in the circumstances. He felt unable to agree with the view taken by Mr. Justice Scrutton. He could not bring himself to think that there was any liability on Mr. Worth, so far as the absence of satisfactory tests was concerned. They could not impose liability upon Mr. Worth unless it could be shown that he was given ground for suspicion. That being so he thought the judgment of Mr. Justice Scrutton on the main issue ought to be reversed. There was, however, a rather trivial matter upon which the learned Judge had found that as to one of three bridges or piers the cement used was mere rotten stuff, and that that was a matter which Mr. Worth must have seen and which he ought to have required to be replaced. He (his Lordship) was not prepared to say that he should have come to the same conclusion upon the evidence, but he was not prepared to differ from the Judge on a matter of that kind. He thought, however, that liberal justice would be done to the plaintiffs if Mr. Worth was held liable in that regard to the extent of £50, which would include any sum for costs, and those costs would be set off against the other costs. To that extent Mr. Worth's appeal would be allowed, with costs.

Lord Justice Phillimore delivered a judgment dissenting, and in the main agreeing with the judgment of Mr. Justice Scrutton.

Lord Justice Warrington delivered a judgment agreeing with that of the Master of the Rolls, and by a majority of the Court therefore the appeal was allowed, with costs.

(Before the MASTER OF THE ROLLS, Lord Justice PHILLIMORE, and Mr. Justice SARGANT.)

Plumber's Mate's Claim under Workmen's Compensation Act against Builders:

Dennis *v.* A. J. White & Co.

THIS case was heard on the 16th inst. upon the appeal of the applicant from the award of Judge Woodfall, sitting at the Westminster County Court, as the arbitrator under the provisions of the Workmen's Compensation Act in favour of the respondents (the employers).

It appeared that the applicant, Alfred James Dennis, of 13, Peabody-avenue, Pimlico, was, at the time of the accident in respect of which compensation was claimed, employed by the respondents, a firm of builders, of Coburg-row, Westminster, as plumber's mate. On August 27 last year Dennis alleged that in the course of his employment he was riding a bicycle in Sloane-square when a motor-car collided with him, with the result that he sustained a compound fracture of the leg. Judge Woodfall, however, held that the accident did not arise out of and in the course of Dennis's employment, and upon that ground he made his award in favour of the respondents. From this decision Dennis now appealed.

At the conclusion of the arguments, the Master of the Rolls, in giving judgment, said in his opinion the appeal failed. He thought the question for decision was wheth accident to the applicant arose out employment or whether it did not. arbitrator was the person to whom that q of fact was left, and his Lordship saw n direction on his part in his finding o The proper test to be applied in arriv a decision upon the words "arising o was to consider whether the risk was rea incidental to the employment. A deci the House of Lords bound that Court t that a decision of a lower Court must be upon a question of fact, if there was ev to support that finding.

Lord Justice Phillimore concurred judgment of the Master of the Rolls.

Mr. Justice Sargant, however, dissente thought that they had to look at th of the present case somewhat carefull applicant was employed by builders, a was employed habitually once a day u bicycle belonging to the firm to get m for the business of the firm. Whilst e on that business in Sloane-square h knocked down by a motor-car and i and the question was whether that a occurred in the course of the app employment and arose out of his emplo The question was whether the applic doing that and riding a bicycle, ran a risk than ordinary members of the publ The point was whether there was an danger to applicant on being asked to bicycle once a day on the firm's business streets of London. It seemed to his L that if one case had to be compare another that the extra danger whi applicant ran in riding a bicycle throu streets of London was much greater th risk incurred by the applicant in th known lightning case. But, however that be, the question in each case was simpl solely one to be judged by the facts c case. He thought that any ordinary m of the public would be startled to h said that a person who had to ride a through the streets of London did not some greater risk than other members public did. Upon the second point. whether it was a question of fact for the C Court Judge, or a question of law, or w it was a mixed question of fact and law, the greatest difficulty. However, in view opinion of the other members of the Cou became unimportant.

The appeal therefore was dismissed.

It is understood that the case will pr be taken to the House of Lords.

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COMPETITION NEWS.

It must be understood that the following para printed as news, and not as an advertisement: a while every endeavour is made to ensure accuracy, w be responsible for errors that may occur.

Additions to Louth County Hall.

The designs submitted by Dublin arc in competition in connection with County Hall have been on exhibition rooms of the Architectural Associati Ireland, 15, South Frederick-lane, D Each of the premiated designs are by arc practising in Dublin, the first premium awarded to Messrs. O'Callaghan & Web second to Messrs. Batchelor & Hicks, an third to Mr. T. J. Cullen. The comp was open to all architects in practice in Ir The drawings will be on view every day be the hours of two and six o'clock except Sat and Sunday until April 1.

◆

OBITUARY.

Mr. F. W. Lacey.

The death took place on the 24th in Bournemouth, after a short illness, o F. W. Lacey, who had been Borough En for over a quarter of a century, and des many public improvements, including Municipal College, the Law Courts, Unde Drive, and the Marine Parades. He responsible for the tramways throughou borough, and one of his last schemes design for the proposed new Pavilion.

Mr. C. Hadfield.

We hear with regret of the death of Mr. C Hadfield, architect, of Sheffield. He h singularly well-informed knowledge of She where he had spent the whole of his life. shall give some notes of his career next

ENERAL NEWS.

Westminster Hall.

n the House of Commons last week Harcourt, in reply to Sir W. Essex, who d in what state relative to the whole under- ng was the work now in progress in the of Westminster Hall, said, "The position he works of preservation is as follows:— truss has been completely reinforced and ed up with new oak; it has also been treated n preservative. One truss has been half- pleted as in the preceding case. Two other ses have been shored up and the steelwork n preparation for fixing at an early date. other trusses have been partly shored up. flèche is nearly completed and ready for ng. A considerable amount of preliminary k has been done, such as the ordering of the selection and ordering of slates; and two steel stages for shoring up all the trusses dealt with are complete. Thirteen trusses ll have to be dealt with. No date can be n for completion."

Charing Cross Bridge.

n the House of Lords on Wednesday last k the adjourned motion for the Second ding of the South-Eastern and London, tham, and Dover Railway Bill was agreed The Earl of Plymouth moved an instruc- to the Committee to whom the Bill will referred to take into consideration the uirements of the traffic over the river at ring Cross and the effect which the Bill have upon them, and to hear evidence n the Royal Institute of British Architects, London Society, and others on the treat- t generally of the very important part of ndon affected.—Viscount Chilston, on behalf the promoters of the Bill, said they would come any assistance which could be given m in beautifying the structure. He pointed that the present bridge was for railway and passenger traffic only, and suggested that authorise the construction of a bridge for ffic of all kinds would be beyond the scope he measure.—The instruction was agreed to.

Rebuilding the Countryside.

he Lord Mayor (Sir Charles C. Wakefield) sided at the Mansion House on Wednesday week over a public meeting called by the rden Cities and Town Planning Association discuss the Report of the Departmental nmittee on Land Settlement for discharged liers and sailors. The Earl of Selborne d that the Report of the Departmental nmittee was now under the consideration the Government. It was proposed by the nmittee to establish certain colonies—in the t place three pioneer colonies—which would experimental. If that experiment were cessful then no doubt those colonies would ome the model for imitation on a large le. It would be impossible to place at ce in the position of owner men with no icultural experience. He agreed that if Board of Agriculture was given the task must keep the land from which the pioneer onies were formed in its own hands, but s policy could only be adopted as part of much larger policy—the rebuilding of the ntryside. A suggestion had been made working the land through limited liability npanies. He could not conceive a more palling social calamity than that the land ould be industrialised in that sense. The roduction of a certain number of such dertakings might be of advantage. But he oked forward, both for social and economic asons, to the multiplication of the number people owning land, whether large farmers small owners.—Mr. W. H. Draper moved a solution welcoming the Report of the Depart- ental Committee on Land Settlement in ngland and Wales for discharged sailors d soldiers, and urging upon the Government e necessity for a speedy application of the oposals set forth. It further commended the notice of the Board of Agriculture and e Departmental Committee the suggestions ade in the Report of the Association. This as seconded by Mr. W. R. Davidge and proved.

The Royal Academy Exhibition.

We understand that the Royal Academy banquet, which is usually held on the eve of the exhibition, will not be given this year. There was no banquet last year. The exhibition will open on Monday, May 1, and close on Monday, August 7.

War Memorials.

With reference to the Patronal Window at St. Kenelm's Chapel, Clent, which was described in our issue of March 17 as the first war memorial, we are informed by Messrs. Morris & Sons, Ltd., 239, Kennington-road, S.E., that they painted a window to the memory of the men who went down in the *Formidable*, which was erected by them at St. Mark's Church, Portsmouth, in July of last year.

Housing of the Working Classes.

The Local Government Board has issued its Report for 1914–15 on matters incidental to the administration of the Housing of the Working Classes Acts and of the Housing, Town Planning, etc., Act. Dealing with the progress of schemes for the provision of working-class dwellings, the Report states:—"The sum total of the loans sanctioned by us during the year for this purpose under Part III. of the Housing of the Working Classes Act, 1890, was £1,125,176, of which £862,441 was sanctioned to urban authorities and £262,735 to rural authorities, the bulk of this sum being sanctioned in the first half of the year. The total exceeds by £365,736, or nearly 50 per cent., the total sanctioned for the same purpose in the year 1913–14, which was itself far in advance of the amount sanctioned in any previous year, and the sum included in this total in respect of loans to rural authorities exceeds the previous highest record by £69,155, or nearly 36 per cent. Only £460,609, or little more than two-fifths of the total of £1,125,176, was sanctioned in the latter half of the year, and of this sum only a very small proportion has been or will be allowed to be raised during the currency of the war." The Report adds:—"Shortly after the outbreak of the war we issued a circular to local authorities, urging them to prepare schemes for the provision of working-class dwellings in anticipation of possible unemployment, and it may here be mentioned that at the end of the year to which this Report relates we had before us no less than sixty-six schemes for the provision of some 4,120 houses by urban authorities and sixty-eight schemes for the provision of some 570 houses by rural authorities.

Industrial Research.

In the course of an address on "The Industrial Outlook and its Relation to the Gas Industry," delivered on March 29 at the eleventh annual meeting of the Society of British Gas Industries, Mr. Horace Moore Thornton, J.P., the Chairman of the Council, referred to the interesting and profitable scheme of industrial research scholarships now in operation in the Universities of Pittsburg and Kansas. He said: "Men who have graduated with distinction and exhibited capacity for original research are nominated by the University as Research Fellows. Manufacturers who are concerned with scientific processes are invited to state, in strict confidence and in detail, to the University certain particular scientific difficulties or problems in their work which they wish solved. They then enter into a contract with the University to pay for a defined time the stipend of a Research Fellow and certain fees, and to give a bonus or royalty to the investigator if the problem is satisfactorily solved. The Fellow, on his part, binds himself by contract to secrecy, undertakes to apply for patents, if required, on behalf of his employers, and enters into certain other covenants. In this manner the interests of all parties are united. The manufacturer has placed at his command the resources of University laboratories and libraries; and his expenditure is strictly limited. The investigator has an inducement to do his best and a stimulus to diligence and preservation of reputation. The University is benefited, and in many cases, as an indirect outcome of the solution of commercial problems, valuable contributions to pure scientific knowledge are obtained. The Research Fellows gradually gain experience in industrial research which makes their work progressively valuable."

Town-Planning in South Yorkshire.

A general meeting of the North-Eastern District of the Institution of Municipal and County Engineers was held at the Union Offices, Doncaster, recently. Mr. J. P. Wakeford (City Engineer of Wakefield) presided over an attendance of about forty members from various parts of Yorkshire and the adjoining counties. A paper on "Town Planning, with Special Reference to the Doncaster District," was read by Mr. Percy Morris, Town Planning Surveyor to the Doncaster Rural District Council. The author dealt with what had been done in regard to town Planning in the Doncaster area, where, he said, the Rural Council had under consideration schemes covering an area of 13,290 acres, divided into the Askern, Carcroft, and Armthorpe areas. These schemes had only reached the preliminary stage of preparation, with the exception perhaps of the Askern area, which was in a more advanced stage.

Organised Science.

A conference convened by the President and Council of the Royal Society was held at Burlington House recently to consider the desirability of establishing a Conjoint Board of Scientific Societies to organise scientific effort in this country. The following resolution was passed unanimously, and a committee was appointed to draft a scheme for giving effect to the resolution and to report thereon to a future meeting, viz., this meeting considers that it is desirable to establish a Conjoint Board of Scientific Societies for the purpose of (1) promoting the co-operation of those interested in pure or applied science; (2) supplying a means by which the scientific opinion of the country may, on matters relating to science, industry, and education, find effective expression; (3) taking such action as may be necessary to promote the application of science to our industries and to the service of the nation; (4) discussing scientific questions in which international co-operation seems advisable.

An Architect's Bequests.

Lieut.-Colonel Henry L. Florence, V.D., who recently died at Bath, in his seventy-third year, leaving estate of the gross value of over £300,000, has bequeathed valuable works of art to the National Gallery, the Victoria and Albert Museum, and the Dulwich Gallery, besides leaving legacies to several London hospitals and other institutions. He has bequeathed to the Trustees of the National Gallery the marble group "Maternité," by Dalou; and the pictures "Greenwich Hospital," by James Holland; "Deauville," by Eugene Boudin; and "Mousetrap," by P. Van der Werff. The Trustees of the National Gallery are also empowered to select any other of his pictures which they consider worthy of a place in the national collection; and it is stated that sixteen pictures have been handed over by the executors for this purpose. It is stipulated that the marble group and the pictures given and to be selected are to be permanently exhibited in the National Gallery and are to be collected and known as "The Henry L. Florence Bequest." To the Victoria and Albert Museum Colonel Florence left such remainder of his pictures, bronzes, enamels, furniture, and objects and articles of art and vertu as may be selected by the trustees or by the committee or a director appointed for the purpose. He asks that these should be as far as possible grouped and permanently exhibited and be called "The Henry L. Florence Bequest." Snyder's "Fox and Poultry" is given to the Dulwich College Picture Gallery. The following legacies are also left by Colonel Florence's will:—National Gallery, St. Bartholomew's Hospital, and Charing Cross Hospital, £10,000 each; British Museum, £1,000; Foundling Hospital, £250; Architectural Association, £1,000; and, for founding an annual prize, another £1,000. To the Haberdashers' Company, of which he was a former Master, Colonel Florence left £3,000. The residue of the estate, subject to two life interests, amounting to something under £100,000, is to be divided equally between St. Bartholomew's Hospital, Charing Cross Hospital, the National Gallery, and a number of other hospitals and museums, including the British Museum. Mr. Herbert Wykeham Lydall, solicitor, of John-street, Bedford-row, and Mr. Alfred Cox, architect, are the executors.

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ILLUSTRATIONS.

Mercers' Hall.

WE devote the whole of our illustrations to Mercers' Hall, which we describe in an article on page 251. This forms the first of a series of articles dealing with the City Companies, which will be illustrated in a similar way and will appear at frequent intervals.

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MEETINGS.

SATURDAY, APRIL 1.

Edinburgh Architectural Association.—Visit to St. Mary's Cathedral. 2.30 p.m.

MONDAY, APRIL 3.

Royal Society of Arts.—Mr. Edward A. Reeves, F.R.A.S., on "Surveying" (II.). 4.30 p.m.

University Extension Lecture (at the Victoria and Albert Museum).—Mr. Banister Fletcher on "Architecture of To-day and Yesterday." 4.30 p m.

TUESDAY, APRIL 4.

☞ *Institution of Civil Engineers.*—Discussion on paper by Sir George Cunningham Buchanan entitled "The Rangoon River Training Works." 5.30 p.m.

WEDNESDAY, APRIL 5.

Royal Archæological Institute.—Ordinary meeting. 4.30 p.m.

Institute of Sanitary Engineers.—Sessional meeting. 7 p.m.

Carpenters' Company.—Mr. Wm. Dawson on "British Forestry Before and After the War." 7.45 p.m.

Institution of Civil Engineers of Ireland.—Ordinary meeting. 8 p.m.

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BOOK RECEIVED.

GUIDE TO THE INCOME TAX. By F. B. LEEMING. (London: Effingham Wilson. 2s. 6d. net.)

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SOME MANCHESTER SKETCHES.

The notes accompanying the sketches of some Manchester buildings in last week's *Builder* were taken largely from Mr. A. E. Richardson's book, "Monumental Classic Architecture in Great Britain and Ireland." Mr. Gordon Hemm wishes to express his sincere apologies to the author for having unintentionally omitted to state the source of his information.

BOOKS.

The Reinforced Concrete Regulations of the London County Council, with Explanatory Notes, by EWART S. ANDREWS, B.Sc. (London B. T. Batsford, Ltd. Price 2s. 6d. net.)

THIS book will be very useful to architects and engineers in the design of reinforced concrete, as the full text of the Regulations which are now in force is given, with portions of special importance printed in heavy type to facilitate reference. It behoves all those engaged in London work to study these Regulations and possess a copy for reference when designing, and in the volume it is a distinct advantage to have explanatory notes which deal with the important points. The notes are given in a separate section at the end, and the section of the regulation is clearly given in each case, so that the reader can quickly refer from one portion of the book to the other. Various numerical examples are worked out to show the application and effect of the Regulations, and these will be useful to many readers. We notice a small error in one of these on page 64, where, in dealing with the example of a column, the safe load is given as equal to ·49 × 66,400 lb., whereas it should be ·49 × 166,000 lb. As the result is given correctly, however, this is obviously a printer's error. The book, which is a convenient size, should have a good sale.

Bridge Foundations. By WM. BURNSIDE, Assoc.M.Inst.C.E. (London: Scott, Greenwood, & Son. Price 4s. net.)

THIS volume is one of the Broadway Series of Engineering Handbooks, and it is intended only as an introduction to the subject of bridge foundations. The work included is only that in connection with bridges crossing rivers or other waters—that is to say, to foundations which are wholly or in part subaqueous. The matter described includes the foundation bed, abutment, and pier foundations, dams, piles, and caissons.

The author considers that much might be done towards standardising the practice in design, and with this we agree. It is true that a special joint committee have been dealing with the question of loads on highway bridges, and the Report was submitted at a meeting of the Concrete Institute, held recently; but a great deal remains to be done before bridge design can be considered as being based on any kind of standard in this country. The various sections of the volume are described in a simple manner, and illustrations and examples from actual practice are included when possible to show the application of different types of work. A particularly useful portion of the book is that devoted to pneumatic caissons, as this class of work is of great importance to engineers, and it is seldom described in such an interesting manner as is the case here. Methods for adjusting caissons in position and the effects of compressed air are dealt with, and some good general information is given. The concluding chapter is devoted to a brief explanation of pontoon and other types not considered in the general notes, and various useful tables are attached at the end of the volume. The book is well arranged and produced.

Limes and Cements. By ERNEST A. DANCASTER, B.Sc. (London: Crosby Lockwood & Son. Price 5s. net.)

THIS is an elementary treatise describing the nature, manufacture, and use of the different classes of limes and cements, and the information contained therein should form an excellent basis for a more advanced study of the subject. The scope of the book is more extensive than the title suggests, as the author includes chapters on Mortars, Concrete, Plastering, and Stuccos in addition to the matter devoted to Limes and Cements. The chemistry and classification of limes are first described and the process of manufacture explained, and these notes are followed by a chapter on Artificial Limes and Cements. The most important section of the book, however, is that which deals with Portland Cement, and the chapter under the heading covers over forty pages.
The author has fully realised the great in
ance of Portland cement in modern bu
work, and he has obviously spared no tr
to make the chapter comprehensive.
manufacture is fully described, with illustra
of kilns, grinding mills, and other plant
the various constituents are considere
relation to value of the finished pro
Chemical analysis and testing form the su
of other chapters, and these are inter
and instructive. The volume is base
G. R. Burnell's treatise on "Limes. Cen
Mortars, etc.," but the whole of the tex
been entirely rewritten and extensive add
have been made.

Paint and Colour Mixing. By A. S. JENN
(London: E. & F. N. Spon. Fifth ed
1915. 9 in. by 5½ in. Pp. 241.)

WE welcome a further edition of this
as showing an increased attention to th
portant subject of colour standardisation,
concerns not only paints but other mat
beyond the scope of this work. In these
when paints are bought ready mixed t
large an extent, such a book as this shou
something to prevent the loss of initiative
this method of purchase is likely to produ

After two introductory chapters on
nature of paint and on strainers, the au
tackles his real subject, dealing first with c
nomenclature—a difficult field—and quot
length various authorities. Some sev
pages follow on mixing and matching sp
colours, and then details of grounds, grai
and the like are discussed. A short ch
on artists' water-colours, giving the ingred
for presenting various natural effects.
interest, as are also some simple tests for qu
though, we fear, few colour users carry
experiments in this direction.

◆

FIFTY YEARS AGO.

Wolverhampton Town Hall Competition

OUR readers are aware that some mo
ago the Special Committee charged with
duty of obtaining plans for a new town
and other public buildings for Wolverha
ton selected two designs from a numbe
competing designs for the first and sec
premiums of £100 and £50 respectively.
the condition upon which the Comm
undertook to recommend the Town Co
to award the premiums to the authors
that they could each be carried out
£15,000, the amount stipulated in the s
fication. It is no secret that the de
selected for the high premium was sen
by Mr. Bidlake, of this town; and that
of Mr. Bates, of Manchester, was the
placed second in order of merit. Both desi
with a copy of the instructions issued to
architects, etc., were forwarded to Mr. Wa
house, architect, for his opinion as to whe
they could be carried out for the amo
specified. We learn that his report has
received, and is to the effect that the prob
cost of carrying out Mr. Bidlake's des
minus the tower, would be about £25,
and that the tower would involve an a
tional expenditure of between £500 and £
He thinks the execution of Mr. Bat
design would probably cost about £25,
The Committee have in consequence reje
both designs, and resolved to send
others, which stood next on the list in t
estimation, to Mr. Waterhouse. One, b
ing the motto of "Salve," is by Mr. Ch
topher Wray, of London; and the oth
distinguished by the motto "Percevera
Virices," was sent in by Mr. Lloyd,
Bristol. The first premium will be awar
to Mr. Wray, should it be found by
report of Mr. Waterhouse that it can
carried out for £15,000.

[*** From the *Builder* of March
1866.—ED.]

.. The ..
y Companies
and
heir Halls.

No. 1.

The Mercers' Company.

Mercers' Company takes precedence
nong the twelve greater Livery
ompanies, and its history stretches
many centuries. The first record
nce of the association which after-
came the Mercers' Company is con-
the copy of a grant dating from
year 1190, in which Thomas de Helles
s his wife, who was a sister of Arch-
ecket, bequeathed to the brethren
omas the Martyr of Acon a piece of
erly belonging to Gilbert Becket, in
t they might build a church thereon;
raternity of Mercers were constituted
f the brethren's hospital, an association
ed up to the period of the Reformation.
ginal derivation of the term Mercer is
but it was probably derived from the
rcator, through the French *mercier*.
re formerly two divisions in the trade,
staple" and "miscellaneous," known
date as mercery, and when silk was
rted it fell under the last heading,
term "silk mercer." Woollen cloths
principal exports of the Mercers, who
silks and fine linens from Flanders.
erdashers' Guild was originally a
the Mercers, and had an altar of their
e church of St. Thomas.

its incorporation the fraternity of
ssembled in the Hall and worshipped
rch of St. Thomas. They also met at
ostelries in the City, among which
rinces Wardrobe in Old Jewry, as well
houses of the wardens. In the early
the fifteenth century the Company
from the hospital a small room and
and the grant was confirmed to them
The chapel was probably attached
spital church, and the little room
he title of *Sale del Mercerie* or Mercers'
the year 1490 the Company, needing
mmodation, tried to purchase Crosby
afterwards Lord Bradbury's house
ry, but finally obtained the consent
aster of St. Thomas to purchase
r House. The cost of the new
as £2,735 16s. 1d., which was raised
utions among the members, and it
enced in 1517 and finished in 1522.

afterwards the Mercers' Company
he right to nominate the Master of
s's Hospital, which was confirmed
hop of London and by Pope Leo X.
nd cloisters were situated close to the
present Hall, and had a frontage to
p of 98 ft. 8 in., bounded by the
church of St. Thomas of Acon on
by Elsyng Spital's house and
r-lane on the west, and by a tenement
"Mitre" on the east.
ital shared the fate of other religious
l was surrendered to Henry VIII. in
King by letters patent granted the
in 1541 the hospital church and
ereof, together with the rectory and church of St. Mary Colechurch, for the sum of £969 17s. 6d., the purchase-money being fixed by the Crown, as in similar cases, at twenty years' purchase of the annual value. The Company, by a separate deed, signed on the same day, covenanted to find three priests to sing and say masses and to celebrate divine service for the King and his successors in the church of the hospital (called the Mercers' Church), and to keep a free grammar school within the City of London in perpetuity, appointing a "sufficient" master to teach twenty-five children and scholars, and also to provide learned men to preach in the Mercers' Church. They subsequently acquired houses in the parishes of St. Stephen, Walbrook, and St. Stephen, Coleman-street, by purchase, their property in the parishes of St. Mary and St. Martin extending from the corner of Frederick-place to Cheapside, along that street to Ironmonger-lane, and northward along the lane for 140 ft. with the exception of a house at the corner of Ironmonger-lane, belonging to Elsyng Spital, which was purchased during the last century.

The church extended from the east of the present chapel to the west side of the ambulatory under the hall, and was about 140 ft. long by 40 ft. broad. It was a building with aisles and chapels rich in monuments, which all perished in the Fire, excepting that of Sir Richard Fishbourne. The Mercers' former chapel was, after the purchase of the hospital church, altered and let out as shops and used for their school.

Queen Elizabeth is said to have been a free Sister of the Company; she was descended from Sir Geoffry Boleyn, who was admitted free by redemption in 1435, and on July 26, 1560, the Court of Assistants hastily assembled on a rumour that the Queen was coming to the Mercers' supper on the following day. A message from Sir Thomas Gresham, then Master, was received, stating that the Queen was actually coming. After all preparations were made Sir Thomas sent word that the Queen had changed her mind, so the Company had to console themselves with entertaining the Lord Treasurer and other noblemen. Sir Thomas Gresham "was to be spoken to, and most of the charge laid on him," as he was "the beginner and doer of all this."

Mercers' Church was celebrated for the Italian and Spanish sermons which were preached there for the benefit of Italian and Spanish Protestants in London, and bequests were made from time to time for special sermons to be preached. In 1615 the Master and Fellows of St. Catherine Hall, Cambridge, covenanted to find a learned divine to preach in the church once a year for ever, and this sermon is now still given every Good Friday, while Paul Birkenhead gave the Company £100 in trust to pay for the maintenance of two sermons at Mercers' Chapel on the anniversaries of the death of Charles I. and the restoration of Charles II. In 1645 the Company agreed to lend their church and Hall for the use of the House of Commons for a solemn thanksgiving after the battle of Naseby, and soon after they petitioned Cromwell against the quartering of soldiers in their hall.

The fraternity of St. Thomas à Becket of Canterbury, which was afterwards known as the Company of Merchant Adventurers, originated in an association by members of the Mercers' Company to promote foreign trading, and had their first charter granted them by Edward I. in 1296. They gradually became detached from the Mercers' Company during the fifteenth century, and were constituted a distinct company in 1594 by Queen Elizabeth. The Merchants of the Staple were a body of great antiquity, and are believed to be an offshoot of the Mercers. They obtained charters from Edward II. in 1313 and 1320, prohibiting the export of woolfels, except through one certain Staple (established mart) in the Netherlands. In 1325 the Staple was fixed at Bruges on the prayer of the citizens of Bruges, Ghent, and Ypres, in which cities the merchants traded. They were controlled by the Mayor of the Staple, and dealt with the staple or chief products of the country, which were sold in the "Staple" towns. The proceedings of the body were regulated by Acts of Parliament, and in the twenty-seventh year of Edward III. an Act was passed to remove the Staple then held at Calais to towns in England, Wales, and Ireland.

The Mercers' Company resigned foreign trade to the Merchants of the Staple and the Merchant Adventurers in the fourteenth and fifteenth centuries, home trade in woollen goods to the Drapers at the end of the fourteenth century, and retail trade to the Haberdashers about the same time or a little later; but the minutes of the English branch of the Adventurers were kept in the Mercers' books down to the time of the Great Fire, and the Merchant Adventurers had a room in the Company's premises for the transaction of their business.

The Mercers' have received numerous charters, the earliest from Richard II. in 1393-94, in which for a fine of 100 marks he granted "to the said liegemen of the aforesaid mistery from thenceforth to have a perpetual commonalty of themselves, and that the same commonalty might be able every year to elect and make four wardens out of the same commonalty and mistery to oversee, rule, and govern the mistery and commonalty aforesaid, and all the men, persons, and affairs of the same for ever." They were given powers to purchase land, tenements, and rents, to be held in support of the poor men of such commonalty or mistery, as of a chaplain to celebrate divine service perpetually for the King and the Queen, and the father and mother of the King, and for the estate and souls of the men of the same commonalty or mistery. Further charters were granted by Henry VI., Edward IV., Philip and Mary, James I., and Charles II., who abridged the rights granted under former charters, but by an Act under William and Mary their former rights were restored to the City and Livery Companies.

The Company's arms were granted in 1568, and confirmed in 1634. Doubts having arisen as to their correct form, the following arms were confirmed to them, and are thus described: "Gules issuant from a bank of clouds, a figure of the Virgin, couped at the shoulders proper, vested in a silver robe adorned with gold, the neck encircled by a jewelled necklace, crined or, and wreathed about the temples with a chaplet of roses alternately argent and of the first, and crowned with a celestial crown, the whole within a border of clouds also proper, and for a crest on a wreath of the colours issuant from a bank of clouds proper, a figure of the Virgin as in the arms." The Virgin in the crest and seal is always referred to as a maidenhead, and there does not seem to be any authority for regarding it as a representation of the Virgin Mary, though the dedication of the hospital of St. Thomas was "in honour of Almighty God and of the blessed Virgin Mary, His Mother, and the most glorious Martyr St. Thomas à Beckett."

In the Great Fire Mercers' Hall perished, and the Company had to undertake the rebuilding of the Royal Exchange, which had come into their possession, together with Gresham's House in Bishopsgate-street in 1596 on the death of Lady Gresham, as well as St. Paul's and Mercers' Schools, their chapel hall and offices. The hall and offices, which form the oldest part of the present buildings, were carried out from the designs of Edward Jerman, surveyor to the Company, and were completed by John Oliver, who succeeded him. The principal parts of this building which remain are the ambulatory and chapel on the ground floor, and the hall and large court-room on the first floor.

The chapel is a square room with gallery lighted into areas on either side by windows. Most of the old fittings were re-used in it. The ambulatory suffers from the absence of light, the windows looking into a narrow space on one side, which is the more unfortunate as it would otherwise convey a great sense of space and dignity. It seems a pity that in the reconstruction of the part of the building facing Cheapside it was not found possible to open it out by making the great staircase open directly out of it with ample top light. The Hall is a finely-proportioned room, very handsomely panelled in oak, with a fine gallery at one end, and a well-designed ceiling, and is lighted over the top of panelling by mullioned windows on either side. The general court-room is dignified and happy in its proportions, and the character of its detail is refined and pleasing. On its walls are fine portraits, one of Sir Thomas Gresham, attributed to Holbein, a portrait of Dean Colet, a second portrait of Sir Thomas Gresham, and other interesting pictures, including an apocryphal portrait of Sir Richard Whittington. The front part of the present building was carried out in 1878 by the Company's surveyor, Barnes Williams; it includes shops facing Cheapside and Ironmonger-lane, a central entrance and grand staircase, which is also approached from the ambulatory, and a drawing-room occupying the central position of the Cheapside front on the first floor. It is a characteristic example of the work of an epoch when the distinctive purpose to which a building was to be put was usually under-emphasised, and when our buildings were somewhat lacking in character; but the problem of arranging a combination of commercial premises with one of the oldest and most historical of the Livery Companies' halls was an unusually difficult one. The staircase, carried out in oak, is ample in size and convenient in arrangement, giving a suitably important approach to the Hall and reception-rooms over.

Between Ironmonger-lane and Fredericks-place, Old Jewry, a second addition in the shape of the provision of new offices for the clerk and surveyor was carried out by the present surveyor, Mr. Dendy Watney, F.R.I.B.A., in 1908. It consists of a block of offices conveniently planned and grouped round a centre courtyard, on one side of which is a columned way affording access from Ironmonger-lane to the ambulatory, a pleasing feature which gives character to a reticent and practical piece of design in which the necessities of lighting and other amenities have been carefully borne in mind.

We have alluded to the connection between the Mercers' Company and trade, but a large part of the work which they have done in the past, and are doing on a greater scale now, is connected with charity and education, and it will be apposite here to refer to some of the great men who have been intimately connected with their history and whose testamentary bequests have been worthily administered by the Company.

The first of these names is Sir Richard Whittington, one of the greatest London merchants in the time of the Plantagenets and a prominent Mercer, who rebuilt the church of St. Michael Paternoster, contributed very largely to St. Bartholomew's Hospital, the Guildhall, and the Library of the Corporation of London, founded a college for priests, and established a chaplain to St. Paul's Cathedral. He also founded almshouses for thirteen men and endowed it, and the original ordinances of this are in the possession of the Mercers' Company. Freemen of the Company, but no liverymen, could be admitted to these almshouses, the Company being bound to maintain their own liverymen. The property of Sir Thomas Whittington was devised to the Company to maintain these institutions. The college was suppressed under the provisions of an Act for the abolition of chantries, etc., in 1548. The original almshouses, situated in the churchyard of St Michael, Paternoster-row, were destroyed in the Great Fire, were subsequently rebuilt, and when they became dilapidated were rebuilt on Highgate-hill, and entitled Whittington College. This is now managed under a scheme of the Charity Commissioners, which, after providing for the upkeep of the college, applies the residue to the payment of pensions and grants to indigent members of the Company and to the relief of the necessitous poor.

Mercers' School is one of the oldest schools in London, and is of Royal foundation. In 1447 a petition was presented to Henry VI. by the rectors of All Hallows the Great, St. Andrew, Holborn, St. Peter, Cornhill, and St. Mary Colechurch, praying that grammar schools might be erected in their parishes. John Neel, rector of St. Mary Colechurch, was also Master of the Hospital of St. Thomas, and the King willed "that it be doone as it is desired," and an Act of Parliament was passed, the School being erected in the parish of St. Mary Colechurch. On the dissolution of the hospital and its surrender to the Crown, the Company, on their purchase of the hospital, covenanted to find and keep a grammar school in perpetuity, and under this covenant Mercers' School was established and first opened in 1542. Thomas Rich, who had been educated there, subsequently left money to the Company to give University exhibitions to poor students educated in the school. On the widening of Old Jewry in 1787, the school was pulled down and the scholars removed to another house. The school was increased in 1879 to 125 boys, and in 1880 to 150 boys, and in 1890 the Company purchased Barnards Inn for purposes of erecting larger buildings, which were carried out from designs of Mr. Thomas Chatfeild Clark in 1893. The Company paid £70,000 for the site.

St. Paul's School was the outcome of a bequest by Dean Colet, who was born in 1466, and became, by the death of his father, possessed of a large fortune. He was admitted to the freedom of the Company in 1508, and two years later communicated to the Company his dispositions for the foundation of a school. During his travels he had perceived the importance of the revival of learning, and desired to equip the children of his country so that they might take their place by the side of learned men of other nations. The site of the School, probably inherited from his father, was on the eastern side of St. Paul's. Its management was left to the Court of Assistants of the Mercers' Company, and when Colet was asked the reason of his trust he replied that there was "no absolute certainty in human affairs," but that for his part he "found less corruption in such a body of citizens than in an or degree of mankind." A scheme was by the Endowed Schools Commission the better management of the School, i quence of which the Company purcha present site in West Kensington in 18 new buildings were erected at a cost of from designs by Alfred Waterhous school ranks third in point of date and a of all English public schools. In 1 governors purchased a site in Bro Hammersmith, and built a school, girls, from the designs of Mr. Gerald H

The Gresham family, who derive name from the village of Gresham in have been closely associated with the Company. Sir Richard Gresham was in 1533, 1539, and 1547, and Lord Mayo He desired to erect a "Burse" or Exc London on the model of that of Antw died without seeing the project carr He was instrumental in obtaining for the the grant of the church and hospita Thomas, and his son, Sir Thomas carried out the building of the Royal E and the foundation of Gresham Coll his death he gave one moiety of th Exchange and the shops thereof to the of London, and the other moiety to the Company and their successors, directi the City Corporation should pay £50 to four persons to read lectures on Ast Music, and Geometry, within the house called Gresham House in Bish street, and that the Mercers' Compan pay £50 to each of three persons to b by them to give lectures on Law, Ph Rhetoric in the same place, as well a sums to hospitals and in relief of the

Gresham College escaped the Fire. Royal Exchange was burnt and rebu enlarged scale by Jarman, the City S at a cost of £65,979 11s., the City Company paying in equal proportions

In 1768 an Act of Parliament wa by which Gresham College was veste Crown for purposes of erecting an Office, and an annuity of £500 was to the Corporation and the Mercers' The stipends of the lecturers were au and the lectures were delivered in ro the south entrance of the Exchan it was burnt for a second time in 1838 the Charity Commissioners reported on the Gresham Estate, they pointed the City and Company were losers by t of Sir Thomas Gresham to the e £201,318 expended by them. The rebuilding the Exchange for the sec amounted to £171,552 6s. 11d., which defrayed in equal parts. The Gresh mittee subsequently purchased a piec at the corner of Basinghall-street an the building known as Gresham Colle has been further enlarged by the pr a large hall with offices over, erected designs of Mr. Dendy Watney, the C surveyor, at a cost of £50,000.

The Mercers' Company took part ference in 1877 with representative Drapers' and Clothmakers' Compani provisional committee of representati Corporation and Guilds of London, w formed to consider the best manner funds could be applied towards the imp in technical knowledge of those engag manufactures of the country, and thi in the foundation of the City an Institute at South Kensington in 18 the Finsbury Technical College is als The City Corporation and the Livery had contributed £900,000 to the City a Institute up to the end of 1912; the co of the Mercers' Company was £80,0 amount.

We have mentioned a few of the directions in which the funds of the have been applied for the furth educational and charitable work in a with the interpretation put upon t of those who have left funds to it. account will show the manner in trade community has grown up, important place which it has occup life of the community, preserving i customs and traditions, but interpre according to the spirit of modern tim

THE BUILDING TRADE.

MASTER BUILDERS' SOCIATION OF NEW UTH WALES.

take the following from the annual :—

State of the Trade.

g the past twelve months there have o serious factors exerting a depressing e on the trade, viz., the war and a extending over a considerable area of e. Towards the end of the first quarter ear there was to some extent a revival, sequently a further depression set in tinued until the end of the year. The effect of these factors on the building as been to considerably delay projects constructional enterprises, though ely a very considerable amount of sidential work in the suburbs has been d with.

ar has also affected the building trade ier way. All imported materials, and hich, though manufactured locally, on imports for their raw material, nsiderably increased in cost (*a*) through ural tendency of the artisans and s to put a little more speed into their account of the fact that employment o secure; and (*b*) a tendency to cut n the part of many builders owing to ll amount of work coming out and nsequently increased competition. s which are entirely of local production rtunately not increased in price. It tful, therefore, whether the increase prices of imported materials really ny increase in the cost of the whole the building owner.

atistics kindly provided by the officers Water and Sewerage Board annually, the number of buildings completed the twelve months in Sydney and show a considerable falling off during od under review. The falling off in ber of buildings completed is greater ity than in the suburbs. In the city re was in 1915 a decrease of 37·3 per against 1914; in the suburbs the amounted to 28·36 per cent. for the riod.

State of the Labour Market.

gh certain trades have been kept y on work in connection with the war, trades there has been a considerable in the numbers employed. Owing to number of men having enlisted for rvice, there has not been the distress re would have been if the falling off ade had been due to any other cause.

Conditions of Contract.

ost important work that the Association e, possibly, in the last twenty years n completed within the past twelve The revising of the Conditions of which has occupied the attention nstitute of Architects and this Asso- r some four or five years, was finally to a close during the past year, and Conditions of Contract and Agreement ne into operation on November 1, 1915, the seal of the Institute and this on. The two documents are printed so that one cannot be used without r, and the control of the selling of uments is in the hands of the Institute ects. Members are reminded of the of insisting on these Conditions of and Agreement Forms in every con- y undertake (with the exception of he Government or municipal councils), unless the specification states that ditions will be used, every member ndorse his tender "subject to the s of contract adopted by the Institute ects and the Master Builders' Asso- New South Wales."

Day Labour and State Socialism.

The Government still continues its policy of extending State employment and State ownership into fresh fields of industrial enterprise. Figures are not available for all the State industrial undertakings, but of those known three show profits on paper and four admit losses. The State enterprises showing profits are:—The South Coast Metal Quarries, profits for the year, £6,322 9s. 5d.; accumulated profits of previous years, £9,914 3s. 8d.; total, £16,236 13s. 1d. In this case the Minister promised at the outset to reduce the price of blue metal about 50 per cent., but no reduction was made then, nor has there been any reduction since. The State Motor Garage shows a profit of £154 13s. 2d. The State Brickworks at Homebush show an accumulated profit of £9,387 19s. 5d., after charging considerably more for its products than they promised when the scheme was first called into being, and after allowing little or nothing for the cost of railway, electric light, and so on. Depreciation is another item that has evidently been made to accommodate itself to the desire of showing a profit.

The State enterprises showing losses are:—The State Brickworks at Botany, which shows a deficiency of £8,696 19s. 4d. The State Limeworks at Botany and Taree show a deficiency of £7,822 11s. 10d. The Rozelle Joinery Works show an accumulated loss of £20,473 8s. 5d., but it is only fair to state that these losses include the loss by fire of £14,917 5s. 7d., so that the loss on trading is shown as £5,556 2s. 10d. The State Timber Yards and Workshops at Uhr's Point have been the cause of the biggest loss to the Government of any of the State undertakings of which figures have been supplied. The net loss for the year ending June 30, 1915, is set down as £25,145 14s. 2d., to which must be added the loss brought forward from the previous accounts of £5,343 11s. 8d. The loss on this undertaking to the end of the last financial year is therefore £30,489 5s. 10d. The above figures have been taken from the Auditor-General's Report.

Industrial Arbitration.

At the outset of the war the State Arbitration Court gave a decision which for the time being closed the activities of the Wages Boards; this was received with strong dissent by the union officials, with the result that early in 1915 the President of the Court delivered another pronouncement modifying the previous one, to the extent that the Boards might continue their work but should only take into consideration the effects of the war not only on the industry itself, but on the community in general. Consequently the Wages Boards have continued their operations since that time, and the Court has also been exceptionally busy in hearing appeals and reconstituting Wages Boards which had expired by effluxion of time.

The compulsory arbitration law was brought into existence for the purpose of forcing employers and employees to settle their differences by other means than strikes and lock-outs, and for the purpose of ensuring employees against sweating, but strikes have been more numerous since the introduction of the law than they were previously. Employers have been fined for breaches of the various awards; employees have been prosecuted for striking, but the penalties have not been enforced. Under such circumstances what can be expected but a disregard for the law, whenever it suits them, by those who find that it is not enforced when they break it?

Technical College.

The new system of technical education, introduced in 1913, appears to be working smoothly and is showing signs of being a considerable improvement on the old methods of teaching. Representatives of employers' and employees' associations are on the Advisory Committees, acting as examiners, giving advice to the Public Service Board in the appointment of teachers, and in many ways assisting the Department to make the system a success. Members of this Association have been doing their part during the past twelve months, and the Association has also continued the system of presenting prizes to successful building trade students.

PUBLIC WORKS, ETC.

Australia.

The Commercial Intelligence Branch of the Board of Trade is in receipt of a copy of the estimates of expenditure of the Government of Western Australia from the General Loan Fund for the year ending June 30, 1916, providing for a total expenditure of £2,103,881, the chief items being as follows:—

Railways and Tramways (£685,975), including additions and improvements to railways opened, £120,000; railway construction, rolling stock, etc., £266,975; electric tramways at Perth, £88,000; electric power station at East Perth, £182,000.

Harbours and rivers (£157,883), including harbour improvements at Albany, Bunbury, Fremantle, etc., £140,100; jetty works, £17,000.

Water supply and sewerage (£337,120), comprising water supply for towns generally and goldfields, sewerage works at Perth and Fremantle.

Agriculture (£540,074), including abattoirs, cold stores, canning works, etc., £121,000; industries, etc., £199,524.

Roads, bridges, etc. (£59,000), including new roads and bridges, £10,000; public buildings, £30,000.

In connection with the above, it may be noted that an Act of the Western Australia Legislature, assented to on December 7, authorises the raising of a sum of £1,245,000 by loan, for the construction of certain public works and for other purposes. A schedule to the Act allots, *inter alia*, £495,000 for expenditure on railways and tramways, £107,000 on harbours and rivers, £130,000 on water supply and sewerage, and £102,000 on the development of agriculture.

EDUCATION AND PRODUCTIVITY.

In the course of an address on "The Industrial Outlook and its Relation to the Gas Industry," delivered on March 29 at the eleventh annual meeting of the Society of British Gas Industries, Mr. Horace Moore Thornton, J.P., Chairman of the Council, said: "Our future depends in no small degree on our educational policy. Enthusiasm is impossible without knowledge; and lack of enthusiasm has been responsible for many of the shortcomings of British workers. Slackness, narrow-mindedness, inability to realise great issues, and lack of perception are largely due to the fact that opportunity has not been provided to secure the knowledge that will enable the true proportions of a man's position as a unit in the nation's industry to be realised. Haphazard methods, providing but a smattering of theory, the endeavour to inculcate knowledge in evening classes only when the youth is exhausted by a day's work, must give place to properly systematised education, with opportunities for training during the daytime. It is of great importance that we should encourage and support our universities and technical schools to enable them to provide for the industries of this country a large number of well-trained scientific men. We are glad that as a Society we assisted in founding the Livesey chair at the Leeds University, and that we have been able to provide annual prizes for successful candidates in the Gas Engineering and Gas Supply examinations of the City and Guilds of London Institute. I am sure as our funds permit we can find no better and more profitable form of investment than in educational encouragement."

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—At a recent meeting of the Streets and Roads Committee of the T.C. tenders for a railing in Spa-street were submitted, and that of Messrs. A. & G. Main, Glasgow, was accepted. A plan of a building in Murray-terrace was approved of.

Aylesbury.—The U.D.C. has passed plans of a building for petroleum storage off Park-street, for the Bowring Petroleum Company, Ltd.

Barnes.—The D.C. has approved the following plans:—Garage, 37, Coval-road, Messrs. Cox & Taylor; additions finings house, Mortlake Brewery, Messrs. Watney, Combe, Reid, & Co.; amended plan of house, Richmond Park-road, Mr. W. A. Lane; and additions to malt elevators, Mortlake Brewery, Messrs. Watney, Combe, Reid, & Co.

Bedford.—The T.C. has approved plans of motor garage, for Mr. F. W. Smart, Shaftesbury-avenue, and house, Mr. R. Jeakins, Cutcliffe-grove.

Belfast.—The Works Committee of the Belfast Harbour Board has approved a plan of a building which Messrs. Workman, Clark, & Co., Ltd., propose to erect on the ground recently let to them at the Clarendon Graving Dock.

Bletchley.—The U.D.C. has passed plans for a new workshop for Messrs. Cook & Son, and plans for houses in Aylesbury-street, for Messrs. Howard Bros.

Braintree.—Mr. A. J. Wicks, Braintree, has applied to the R.D.C. for water to be laid on to the Courtauld Estate, Bocking, where he proposes to build four houses. Sixteen plots on this estate are about to be built upon. It has been decided to lay the main and to construct a hydrant on it.

Broadstairs.—Broadstairs and St. Peter's Council has approved plans of additions to Bruce Lodge, Kingsgate, for Sir W. Capel Slaughter, and alterations to the Wrotham Arms, Broadstairs, for Messrs. Rigden & Co.

Coventry.—The R.D.C. has approved plans for a new messroom at the Humber Works and for extensions of offices and drainage, for the Albion Drop Forgings Company, Ltd.

Darton.—The Council has passed plans for eight houses in Kexbro'-lane, Darton, for the Darton Main Colliery.

Dover.—The R.D.C. has approved plans for the rebuilding of Mr. Hodgson's premises at Temple Ewell, which were destroyed by fire recently. The plans were submitted by Messrs. Worsfold & Hayward.

Durham.—Plans passed by the R.D.C.:—New-street, belonging to Messrs. Walter Scott, Ltd., at Quarrington Hill; and addition to dwelling-house, for Major J. Willan, at Shincliffe.

Edinburgh.—The T.C. has adopted the recommendations of the Electric Lighting Committee for an additional expenditure of £11,000 at M'Donald-road Station. The Council has agreed to the acceptance of estimates for the building and steel work of the new generating station at Portobello amounting to £30,570. Plans have been submitted to Edinburgh Dean of Guild Court for an extension to the sphagnum moss factory at Messrs. Redpath, Brown, & Co.'s works, Easter-road.

Farnborough.—The U.D.C. has passed plans for a new cinema theatre which it is proposed to erect in the Farnborough-road, for Mr. A. Chaplin.

Foleshill.—The British Structural Syndicate (Birmingham) proposes to erect some hundreds of bungalows on an estate at Foleshill.

Hendon.—The following plans have been approved by the D.C.:—Motor garage, High-wood-hill, Mr. A. E. Colebrook; house, Brent-mead-place, Mr. Martin Harvey; additions to 50, The Ridgeway, Golder's Green, Mr. J. Finch; motor garage, 16, The Riding, Mr. A. J. Edmonson; workshop, Golder's Green, the Vulcan Car Agency; detached house, Sunnydale-gardens, Mill-hill, Mr. Golby; motor house, 1, Goodwyn-avenue, Mill-hill, Mr. E. T. Clarkson; five houses, St. George's-road, Mr. J. D. Rawlins; storehouse, Colindale Wine Stores, Colindale-avenue, Mr. H. Wiltshire; twelve houses, Princes Park-avenue, Mr. E. H. Waterman; enlargement of workshops, Finchley-lane (Globe Radio Apparatus Works), Mr. H. R. Rivers Moore; messrooms, London Aerodrome, the Grahame-White Aviation Company; caretaker's rooms, London Aerodrome, the Grahame-White Aviation Company; two houses, Golder's Green-road, Mr. E. Wright; eighty houses, Sinclair-grove, Haymills, Ltd. Messrs. E. Bevir & Son transmitted engrossment of agreement varying the terms of agreement for the purchase of land for a hospital site. A resolution was passed that the agreement be signed, and that a cheque be drawn in payment of the amount of the Council's share in respect of loss of rents in accordance with the terms of the agreement of May 31, 1915.

Lanarkshire.—An application by the Middle and Lower Ward Committees of the Lanark C.C. and the Corporation of Rutherglen for the purpose of securing power to prepare town-planning schemes in Cambuslang, Burnside, and a part of the parish of Carmunnock, and in an area already lying in the burgh of Rutherglen, was the subject of an inquiry by the L.G.B. for Scotland at Glasgow recently.

Linthwaite.—A plan of a warehouse at Manchester-road, for Messrs. Geo. Cock, Ltd., has been approved by the U.D.C.

Oldbury and Langley.—A scheme has been formulated by Messrs. Accles & Pollock, Ltd., for the development upon garden city lines of the Basons-lane and Vicarage Farms Estate. Sanction has been secured to the immediate erection of sixty-four houses upon a section of the land, and plans of workmen's cottages, as prepared by the Bournville officials, have now been definitely approved.

Ossett.—Plans passed by the T.C.:—Dwelling-house in Runtlings-lane, for Mr. C. Hinchliffe; structure to carry a water tank at Manor Mill, for Messrs. Tennant & Rodley; rebuilding of carbonising shed in Dale-street, for Messrs. Langley Bros.

Scotland.—Lord Provost Dunlop is about to inaugurate a fund for the establishment in the West of Scotland of a hospital for limbless sailors and soldiers.

Southend.—The following plans have been approved by the T.C.:—Bungalow, Scarborough-drive, Mr. E. L. Walmsley; two houses, North View-drive, Mr. T. Sloman; addition to bungalow, Marguerite-drive, Mr. S. C. Arnold; conversion of shop into house, Park-street, Mr. F. P. Guiver; conversion of house into shop, 399, London-road, Mr. F. G. Bethley; motor house, "Hillcrest," Cliffsea-grove, Mr. G. Rogers; scullery, "Heston," Cliffsea-grove, Mr. F. Watmough; bathroom, "Sandown House," Branksome-road, Mr. H. T. Cook; bungalow, Lime-avenue, Leigh, Mr. S. C. Arnold; bungalow, Cliffsea-grove, Mr. C. H. Bentley; motor garage and alterations, 33 and 35, High-street, and 3, Clarence-street, Mr. R. Arnold. The Borough Surveyor has laid before the T.C. reports as to the inquiries made by him affecting the various estates included within the area of the North-Western Town-Planning Scheme, and also upon the question of preparing a town-planning scheme in respect of the remaining undeveloped portions of the borough.

Staines.—A plan for a house in Dawley-road, Harlington, deposited by Messrs. F. & H. Wakeman, has been approved by the R.D.C.

Stalybridge.—The Highways Committee has passed plans for a transformer house proposed to be erected by Goodbrand & Co., Ltd., Britannia Foundry, Clarence-street.

Westcliff-on-Sea.—Town-planning schemes have been prepared for the various outlying parts of the town which have not yet been developed.

Yarmouth.—Plans approved by the T.C.:—House, Station-road, Southtown-road, for Mr. H. R. Middleton; motor shed, Belvidere-road, for Mr. Docwra; oil tank and shed, G.E.R. Goods Yard, Vauxhall Station, for the "Shell" Marketing Company, cottage and shed, Bure Bank, Runham, for the British Gaslight Company; alterations to fishing premises, Nelson-road Central, for Messrs. Mitchell & Sons.

NEW GOVERNMENT CONTRACTS.

War Office.

Cable and Wire, Electric.—S. S. Abelson & Co., 28, Clerkenwell-road, E.C.; British Insulated and Helsby Cables, Ltd., Helsby, near Warrington; Connolly Bros., Ltd., Blackley, Manchester; W. T. Henley's Telegraph Works Company, Ltd., North Woolwich, E.; Hooper's Telegraph and India Rubber Works, Ltd., 31, Lombard-street, E.C.; India Rubber, Gutta Percha and Telegraph Works Company, Ltd., Silvertown, E.; Johnson & Phillips, Ltd., Charlton, S.E.; St. Helen's Cable and Rubber Company, Ltd., Bank Quay, Warrington; Siemens Bros. & Co., Ltd., Woolwich, S.E.

Cranes.—Butters Bros. & Co., Ltd., Glasgow; Grafton & Co., Vulcan Works, Bedford; Ransomes & Rapier, Ltd., Ipswich; J. H. Wilson & Co., Ltd., Dock-road, Birkenhead.

Engines, Oil.—Petters, Ltd., Victoria-street, Bristol.

Granite Setts.—J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.

Plant, Acetylene, Welding, etc.—Imperial Light, Ltd., New-road, Battersea, S.W.

Sheets, Corrugated, Iron and Steel.—J. Summers & Sons, Ltd., Hawarden Bridge Works, Shotton, Chester.

Steel, Constructional.—Earl of Dudley's Round Oak Works, Ltd., Brierley Hill; Frodingham Iron and Steel Company, Ltd., Scunthorpe.

Tanks.—T. Fildes, Thornton-street, Collyhurst, Manchester.

Tools (Term Contract).—Peacock Bros., 318, Sheffield-road, Tinsley, Sheffield.

GENERAL BUILDING NE

NEW POST OFFICE, BUCKIE.

Buckie's new Post Office, which is sit the south side of East Church-street, wa for business a few days ago. On ente front door one approaches a roomy offi floor outside the counter is laid with til behind the counter the floor is of woode The postmaster's room is situated al centre of the building. At the rear is ing office, which is the largest room building. Adjoining the sorting offi store-room. Near by are the retirin for male clerks and postmen. The Po is heated throughout with hot water ra At the rear of the building is a courty several outhouses. Messrs. Sutherland & Aberdeen, were the architects, and the con were:—Masons—Messrs. Alex. Milne Buckie; slaters and plumbers, Messrs J. & Son; joiners, Messrs. Geddes & Portessie; painters and glaziers, Me Kintrae & Son, Elgin; plasterers, Rodger & Baxter, Aberdeen.

TRADE NEWS.

Boyle's latest patent "air-pump" ve have been applied to the Council Resolven, Neath, Glam.

We have been informed that some pits situated at Aberdeen have bee watertight with Pudloed cement concr

The Langley Silk Mills, Macclesfi being supplied with Shorland's patent roof ventilators by Messrs. E. H. & Brother, Ltd., of Failsworth, Manch

Messrs. Alfred Goslett & Co., Ltd., a a dividend of 8 per cent. on Ordin Participating Preference Shares, £l reserve and £3,810 forward, subject to and excess profit taxes.

Owing to the growth of his business asked to state that Mr. Ernest Ingra advertising agent, has now remove Stanton-road to more convenient of 2, The Broadway, Wimbledon, S.W.

WAGES IN THE BUILD TRADE.

Derby.—At the recent annual of the National Board of Conciliation Building Trades an appeal was hea the carpenters and joiners of this distri application was for an advance in but at the outset a question arose a validity of the notice. The local rules that notice for an alteration must within the first week in November. operatives had handed in early in O request for an advance in wages and a tion of the rule as to overtime, couple request for a relaxation of the rule as t The employers had refused the re and called attention to the fact that as to notice had not been complied wi operatives contended, however, th request was in effect a notice as well as for relaxation of the rule as to notice, fact that it was given prior to the first November did not render it invalid. discussion ensued, and eventually the motion was agreed to and became the of the Board:—"That, though this of opinion that notice ought to have be in the first week in November, it recc the Derby builders to grant an advan per hour on May 1 to the carpent joiners, and that all other matters drawn."

Exeter.—An appeal from the ca and joiners of this district for an ad wages of ½d. per hour was heard at th meeting of the National Board of Co for the Building Trades, held in Lo March 13. For the operatives Messrs. Langmead, and Jefferies in their stated the demand was based upon the cost of living. The existing rate was hour, and the last increase, ½d. in 1914 first in seventeen years. For the e Mr. Westcott appeared, supported by

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* See also our list of Competitions, Contracts, etc., on page 256.

that there was little work going on
save in one or two cases, where war
progress; competition was very keen
ounding lower-paid districts; the
were sympathetic, but wanted the
to wait until the war is over. After
the evidence the Board decided :—
wages of Exeter carpenters and
increased from 8d. to 8½d. per hour
xt pay day."

.—At the recent annual meeting
tional Board of Conciliation for the
Trades an appeal was considered
rpenters and joiners and bricklayers
for an interpretation of the overtime
ned in the working-rule agreements
tween these unions and the London
ilders' Association when applied
tion of ante-time (viz., time worked
arting time in the morning). Mr.
or the appellants, traced the history
tion, which he contended showed that
for many years had been to pay
ne at double rate, but that latterly
n had arisen that the rule did not
double time should be paid for ante-
nly time and a quarter. Mr. Adams
he contention. Mr. Renshaw replied
spondents, citing precedents which
ed supported the contention of the
that the overtime rule did not mean
worked prior to starting time next
s to be paid for at double time rate,
and a quarter, and said rules with
rs and machinists actually so pro-
er considering the evidence, the
led :—" That this Board is of opinion
rules agreed upon between the
and joiners, the operative bricklayers,
M.B.A. imply that ante-time should
as double time." In the case of a
peal by the operative bricklayers
rpretation of how far, if at all, the
working-rule agreement bearing on
ent of disputes became inoperative
ence of both parties having joined
l Conciliation Scheme, wherein the
of the operatives was that the
by became inoperative, and the
of the employers was that it did not,
of the Board was that the rule in
mains in force, and that all differ-
ondon must follow the course of
aid down in the National Conciliation

er.—An appeal by the operative
and joiners, bricklayers, and
this district was heard at the recent
eting of the National Board of
for the Building Trades. The
was for an advance of wages of 1d.
the existing rates of 9d. per hour
ters and joiners and bricklayers,
er hour for labourers. For the
Messrs. Blount, Manning, Collyer,
said that the demand was based
ncreased cost of living. Trade was
o munition work was going on. In
rs they had only had two advances
hour; the last was two years ago.
spondents Mr. J. Stokes said the
vere sympathetic to the demand, but
g trade was a dwindling one in
The alleged scarcity of labour was
ration to munition areas. Messrs.
Spicer supported, and drew atten-
low rates prevailing in neighbouring
The Board, having considered the
ne following motion was agreed to
the decision of the Board :—" That
of ½d. per hour be granted to the
peratives as from April 1."

MASTER BUILDERS' ASSOCIATION.

al meeting of the Ipswich Master
ssociation was held recently. Mr.
een, President, was in the chair,
y the master builders of the town.
Green was re-elected President for
year, Mr. Robert Catchpole Vice-
and Mr. Charles Borrett Treasurer
ry. The Executive Committee was
ith the addition of Mr. Buckingham
as decided not to hold the annual
year on account of the unsettled
onal affairs.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Brick-layers.	Car-penters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Masons' La-bourers.	Brick-layers' La-bourers.	Plas-terers' La-bourers.
	d.	d.	d	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¼	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7½	7½	7½
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	9	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¼	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	9¾	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10½	10½	10	10	8½	7½	7½	8
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9¼	9	9	8¼	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10½	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	9½	10½	9	8½	8½	9
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½†	10¼	9½	10	10	9	7¼	7½	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6¾	7	7¼
Stockton-on-Tees	10	10½	10¼	10¼	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10½	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	10	8	10	8	7½	7½	7½
Worcester	8½	9½	9½	9	9	9	7½	6½	6¼	6¼
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk** *) a
advertised in this number: Competitions, —; Contracts, iv.; Public Appointments, —; Auction Sales, xviii. Cert
conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not b
themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be m
for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those will
to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while ev
endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 31. — **Bangour.** — AMBULANCE SHED.—The Edinburgh District Board of Control invite tenders for the erection of ambulance shed at Railway Station, Edinburgh War Hospital, Bangour. Relative schedules may be obtained and plan seen at the Clerk of Works' Office, Bangour. Schedules may also be obtained from the Subscriber.

APRIL 1. — **Stratford-on-Avon.**—ALTERATIONS, ETC.—The Stratford-on-Avon and Midland Junction Railway Company invite tenders for alterations and additions to present offices. Names to the architects, Messrs. Knight & Hebery, 5, Rother-street, Stratford-on-Avon.

APRIL 3.—**Bradford.**—GARAGE, ETC.—Erection of garage and petrol store at Dumb Mill, Frizinghall, for the Corporation. Forms of tender, etc., of the City Architect, Town Hall, Bradford.

APRIL 3. — **Cowes.** — ALTERATIONS. — Messrs. Timothy White Co., Ltd., invite tenders for alterations to their premises, 18, High-street, Cowes, I.W. Plans, etc., can be obtained on the premises. Deposit, 5s.

APRIL 4.—**Chippenham.**—REPAIRS, ETC.—The Small Holdings and Allotments Committee of the Wilts C.C. invite tenders for repairs, etc., at Curricombe Farm, West Tyrherton, Chippenham. Specifications, etc., of Mr. J. George Powell, County Surveyor, County Surveyor's Office, Trowbridge.

APRIL 5.—**Tonypandy.**—ALTERATIONS, ETC.—For alterations, etc., to Nos. 62 and 63, Dunraven-street, Tonypandy. Plans, etc., of Mr. E. Ivor Evans, architect, Tonypandy.

APRIL 7.—**London.**—PAINTING, ETC.—Painting and repairs to iron and other fences at Tottenham cemetery, for the Tottenham and Wood Green Burial Board. Form of contract, etc., of the architect, Mr. J. C. S. Mummery, 13, Fitzroy-square, W.

APRIL 7.—**Pontefract.**—REBUILDING.—For the pulling down and rebuilding of the Pine Apple Inn, Pontefract, for Messrs. Carter's Brewery Company, Ltd., Knottingley. Particulars of Mr. W. J. Tennant, architect and surveyor, Pontefract.

✱ APRIL 13.—**Highgate Hill.**—WALLING AND DOORWAYS.—The Guardians of St. Mary, Islington, invite tenders for erecting walling and forming doorways in the basement of C block at Infirmary, Highgate Hill, N.

NO DATE.—**Bradford.**—PAINTING.—For painting fourteen licensed houses and cottages adjoining (one or any number may be tendered for). Particulars of Messrs. Waller & Son, Ltd., Upper Millergate, Bradford.

NO DATE.—**Glangevlin (Co. Cavan).**—IMPROVEMENTS.—For improvements to St. Patrick's Church, Glangevlin, Co. Cavan, for Rev. P. McGriskin, P.P. Plans and specifications can be seen at the Parochial House, Glangevlin, or at the offices of Mr. J. J. McDonnell, F.R.I.A.I., 27, Chichester-street, Belfast.

NO DATE.—**Irvine.**—EXTENSION TO PIER.—For labour only for extension to pier at Ailsa Craig. Specifications, etc., at 124, Harbour-street, Irvine.

FURNITURE, MATERIALS, etc.

APRIL 3.—**Bolton.**—MATERIALS.—Supply to the Guardians of plumbers' and joiners' requirements, paint, etc. Form of tender, etc., on application at the Poor Law Offices.

APRIL 3.—**Rosslynlee.**—PLUMBERS' MATERIALS, ETC.—Supply to the Midlothian and Peebles District Asylum, Rosslynlee, for six months of plumbers' material, etc. Forms of tender of the Clerk and Treasurer, 19, Heriot-row, Edinburgh.

APRIL 3.—**Teddington.**—MATERIALS.—Supply to the U.D.C., for the year ending March 31, 1917, of builders' materials. Forms of tender of Mr. Marshall Hainsworth, Surveyor to the Council, Council Offices, Teddington.

APRIL 10.—**Upholland.**—MATERIALS.—Supply to the U.D.C. of builders' materials for the year ending March 31, 1917. Forms of tender, etc., from the Surveyor, Council Offices, Upholland.

APRIL 12. — **Lanark.** — OILS.—Supply to the District Committee of the Middle Ward of the County of Lanark of oils, grease, etc., for their Dunduff Quarry, near Blackwood. Forms of specification from the Subscriber.

ENGINEERING, IRON, AND STEEL.

APRIL 1.—**Manchester.**—HYDRAULIC VALVES.—Supply to the Waterworks Committee of hydraulic valves, manhole frames, firecock boxes, etc. Particulars of the Secretary, Waterworks Offices, Town Hall, Manchester.

APRIL 3.—**Marykirk.**—RENEWAL OF VIADUCT, ETC.—The Directors of the Caledonian Railway Company invite tenders for the removal of the existing cast-iron superstructure of the viaduct carrying the company's main lines over the River North Esk, near Marykirk, and in construction of a new steelwork superstructure, the supply, delivery, and erection of about 900 tons of wrought steelwork. Drawings, etc., of the Company's Engineer, Buchanan-street Station, Glasgow. Deposit, £2 2s.

APRIL 3. — **Salford.**—FOUNDATIONS.—Concrete foundations for 5,000 k.w. turbo alternator for the Electricity Department. Particulars from the Borough Electrical Engineer, Electricity Works, Frederick-road, Salford.

APRIL 5.—**Rochdale.**—TUBES AND FITTINGS, ETC.—Supply to the Gas and Electricity Committee of wrought-iron tubes and fittings, cast-iron pipes and specials, No. 8 steel charging shovels (Parkes), bar and sheet iron, galvanised iron buckets, 12 in., 84 lb. per doz., engine, cylinder, and gas engine oils. Forms of tender of Mr. T. Banbury Ball, Manager, the Gas Works, Dane-street.

APRIL 6.—**Dublin.**—ELECTRIC LIGHTING.—The Housing Committee of the Corporation invite tenders for the electric lighting of (1) Beresford-street and Church-street Dwellings; (2) Trinity Ward Dwellings. Specifications, etc., at the office of the City Electrical Engineer, Fleet-street, Dublin. Deposit, 10s. 6d.

ROAD, SANITARY, AND WATER WORKS.

MARCH 31.—**Cannock.**—GRANITE, ETC.—Supply to the U.D.C. for twelve months of granite, blast furnace slag, tarred blast furnace slag, kerb and setts, stoneware pipes and gullies. Forms of tender, etc., of Mr. Robt. Blanchard, Engineer and Surveyor, Council Offices, Cannock.

MARCH 31.—**Faversham (Kent).**—GRANITE.—Supply to the Corporation of about 1,300 tons of granite broken to a 2-in. gauge. Mr. Guy Tassell, Town Clerk, 20, West-street, Faversham.

APRIL 1.—**Moulton.**—BROKEN GRANITE.—Supply to the R.D.C. of about 500 tons of 1¾-in. to 2-in gauge best broken granite. Tender forms from Mr. T. H. Brown, Acting Clerk to the Council, Deva Chambers, Newmarket.

APRIL 1.—**Patrington.**—STONE.—Supply to the R.D.C. of stone for use on the highways for the year ending March 31, 1917. Tender forms, etc., of Mr. W. H. Snaith, District Surveyor, Patrington, Hull.

APRIL 1. — **Ramsey (Hunts).** — MA
Supply to the U.D.C. of road materi
Richard F. Serjeant, Clerk to the
Ramsey, Huntingdonshire.

APRIL 1. — **Stratford-on-Avon.** —
SCHEME, ETC.—The Stratford-on-Avon a
land Junction Railway Company invite
for sewerage scheme in cast-iron and
ware pipes, manholes, etc., and water
3-in. cast-iron and ¾-in. lead piping, i
hydrant meters, etc. Names to the a
Messrs. Knight & Hebery, 5, Roth
Stratford-on-Avon.

APRIL 3.—**Normanton.**—MATERIALS.—S
the U.D.C. of road materials for twelve
Specifications, etc., from the Surveyor,
Offices, Normanton.

APRIL 3.—**Romford.**—GRANITE, ETC.—S
the U.D.C. of broken granite, clean
chippings, distilled tar, etc. Forms of
the Surveyor, Council Offices, Mark
Romford.

APRIL 3.—**Sunbury-on-Thames.**—GRA
—Supply to the U.D.C. of granite, tarm
and flints. Particulars of Mr. Harold F
A.M.Inst.C.E., Surveyor to the Council,
Offices, Sunbury-on-Thames.

APRIL 3.—**Tenterden.**—GRANITE, ETC.
to the R.D.C. of granite or other
macadam, Kentish ragstone, etc. F
tender of Mr. W. L. C. Turner, Dist
veyor, Tenterden.

APRIL 4.—**Maldon.**—MATERIAL.—Suppl
T.C. of road material. Specification, etc
T. R. Swales, M.Inst.C.E.I., Borough
Municipal Offices, Maldon.

APRIL 5.—**Stanley.**—WHINSTONE, ETC.
to the U.D.C. of whinstone and
macadam, broken slag and slag c
Forms of tender, etc., of the Surve
Routledge, Council Offices, Stanley, S

APRIL 6.—**Caistor.**—TAR.—Supply to th
of about 8,000 to 10,000 gallons of r
distilled tar. Schedules, etc., of Mr
Padley, Clerk to the Council, Counci
Caistor, Lincs.

APRIL 10.—**Pocklington.**—STONE.—Su
the R.D.C. of best blue stone and slag
of tender, etc., of Mr. Arthur J. Olive
Pocklington.

APRIL 13.—**Linlithgow.**—TAR MACAD
laying about three miles of the Cramon
road with tar macadam for the C.C.
tender, etc., of Mr. A. M. Smith, Cou
Office, Linlithgow.

Auction Sales.

✱ APRIL 4.—**Willesden Green.**—Mess
Skelding & Co. will sell by auction
premises, the stock, plant, and machi
builder and decorator.

✱ APRIL 6.—**Surrey.**—Mr. H. W. S
sell by auction, on the premises, the s
general and furnishing ironmonger and
and plant of a builder and decorator.

✱ APRIL 10.—**Strode.**—Messrs. Kidwe
will sell by auction, at Commercia
quantity of timber.

✱ APRIL 18. — **Deptford.** — Messrs
Horsey, Sons, & Cassell will sell by a
the premises a 10-h.p. traction engine
trailers.

✱ APRIL 18. — **Deptford.** — Messrs
Horsey, Sons, & Cassell will sell by a
the premises the plant of a road-pa
tractor.

[Those with an asterisk (*) are advertised in this issue.]

ES CURRENT OF MATERIALS.

to the exceptional circumstances which t the present time, prices of materials e confirmed by inquiry.]

our last issue oils have been reduced; turps and her prices increased.—ED.

im in this list is to give, as far as possible, the rices of materials, not necessarily the highest . Quality and quantity obviously affect prices which should be remembered by those who of this information.

BRICKS, &c.

000 Alongside, in River Thames.	£ s. d.
ks	2 0 0
ocks for Facings	2 12 0

,000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
......	1 10 0	Best Blue Pressed Staffordshire ..	5 0 0
eham	3 12 0	Do. Bullnose ..	5 5 0
Pressed Facing	5 5 0	Best Stourbridge Fire Bricks ..	4 15 0

BRICKS—

White, and Glazed ers ..	13 7 6	D'ble Str'tch'rs	18 17 6
......	12 17 6	Double Headers	15 17 6
ullnose 4½ in.	16 17 6	One Side and two Ends	19 17 6
		Two Sides and one End	20 17 6
		Splays and Squints	18 7 6

ond Quality £1 per 1,000 less than best.

	s. d.	
allast	7 9	per yard, delivered.
nd Pit Sand	8 0	,, ,, ,,
hed Sand	9 0	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
land Cement	2 5 0	..	2 8 0

1s. alongside in 80-ton lots.

e 2s. 6d. per ton extra on above.

nd Blue Lias Lime.... 1 5 6 at rly. depôt.

he cement or lime is exclusive of the ordinary charge for sacks.

e Lime .... 18s. 0d. per yard delivered.

ge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
ONE — delivered in railway trucks at urne Park, Paddington, G.W.R., or Lambeth, G.W.R., per ft. cube	1 7
delivered in railway trucks at Nine L. & S.W.R., per ft. cube..............	1 8¾
delivered on road waggons at Nine Elms	1 9¼

STONE—

	s. d.
Whitbed, in random blocks of 20 ft. ge, delivered in railway trucks at bourne Park, G.W.R., South Lambeth, R., or Nine Elms, or L. & S.W.R. per ft.	2 5½
delivered on road waggons at Pimlico f or Nine Elms Depôt, per ft. cube ..	2 6½

Basebed, 2d. per ft. cube extra.

BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
n blocks ..	2 0	Closeburn Red Freestone	2 2
ocks	1 7½	Red and White Mansfield Random block	2 9
in blocks	2 4	Yellow Magnesian Limestone do. do.	3 3
Dale in	2 5		

ONE—*Robin Hood Quality.*

t. Cube, Delivered at Railway Depôt.	s. d.
random blocks	3 4

Ft. Super., Delivered at Railway Depôt.

	s. d.
n two sides landings to sizes (under uper.)	2 5
ed two sides ditto, ditto	2 8
two sides slabs (random sizes)	1 0½
in. sawn one side slabs (random sizes) ..	0 8¼
in. ditto, ditto	0 6¾

RK—

Ft. Cube, Delivered at Railway Depôt.	
random blocks	3 0

Ft. Super, Delivered at Railway Depôt.

two sides landing to sizes (under 40 ft.	2 3
ed two sides ditto	2 7
two sides slabs (random sizes)	1 0
aced random flags	0 5

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
ine-made tiles or hand-made sand-tiles from either Broseley or shire district	2 12 6
al ditto	2 15 0
alley tiles (per dozen)	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£ s. d.
Bangor slates, 20 by 10	11 16 0
ty ,, ,, ...	11 10 0
,, 16 by 8	5 15 0
Portmadoc, 20 by 10	11 13 6
ty ,, ,, ...	11 3 6
,, 16 by 8	5 15 0

WOOD.

prices should be confirmed, as the market is *changing daily.*

DING REDWOOD.

orted sizes. Per standard.

	£ s. d.		£ s. d.
n. by 12 in., 4 in. in., 3 in. by 11 in., by 9 in., and 2 in. in.	33 10 0	..	34 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32 10 0	..	33 10 0
Battens: 2 in., 2½ in., and 3 in. by 8 in.	31 10 0	..	32 10 0
2 in., 2½ in., and 3 in. by 7 in.			
2 in., 2½ in., and 3 in. by 6 in.			
2 in., 2½ in., and 3 in. by 5 in.			
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.			
3 in. by 4 in., and 3 in. by 4½ in.			
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.	
¾ in.	1 0 0		
Seconds: building quality deals, battens, boards, and scantlings	1 0 0	less than best.	
Best Middling Dantzic and Memel Fir Timber Logs (average specification) ..	Per load of 50 ft. cube. 10 0 0	..	—
Seconds do. do.	9 10 0	..	—
9 in. to 10 in. do.	8 10 0	..	—
6 in. to 8 in. do.	8 0 0	..	—

Stocks very limited.

Sawn pitch pine logs (about 35 cu. ft. average)	Per load. 10 0 0	..	11 0 0
Do. 6 in. to 10 in.	9 0 0	..	10 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Under 2 in. thick	0 10 0		extra.

JOINERS' WOOD.

White Sea First Quality Red:			
4 in. by 11 in..........	39 0 0	..	40 0 0
3 in. by 11 in. and 2 in, by 11 in.	38 0 0	..	39 0 0
4 in. by 9 in.	37 0 0	..	38 0 0
3 in. by 9 in. and 2½ in. by 9 in.	36 0 0	..	37 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	33 0 0	..	34 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Seconds quality	2 0 0		less than best.
Third quality	£2 to £3		less than seconds.
Archangel White Deals—			
Best 3 in. by 9 in. and 10 in. and 11 in.	36 0 0	..	37 0 0
Seconds, do.	2 0 0		less than best.
U.S. Battens	30 0 0	..	32 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 6½ in. planed and shot	1 16 0	..	1 19 0
1¼ in. by 6½ in. planed and matched	1 16 6	..	1 19 6
1 in. by 6½ in. planed and shot	1 9 0	..	1 12 0
1 in. by 6½ in. planed and matched	1 9 6	..	1 12 6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1 4 0	..	1 6 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
⅝ in. by 6½ in. do.	1 0 0	..	1 1 0

	Per standard.		
Columbian or Oregon Pine, best quality	42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		,,
Seconds, regular sizes ..	43 10 0		,,
Oddments	37 10 0		,,
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super., as inch	0 1 0	..	0 1 3
¾ in. do. no...	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super., as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super., as inch	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut..	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions..	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

Turning extra.

METALS (*Continued*).

Per ton, in London.

IRON—	£ s. d.		£ s. d.
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality ..	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0

Steel Bars, Ferro-Concrete quality, £18 basis price.

Hoop Iron, basis price	19 10 0	..	20 0 0
,, ,, Galvanised	30 0 0	..	

(*And upwards, according to size and gauge.)

Sheet Iron Black—			
Ordinary sizes to 20 g.	19 10 0	..	20 0 0
,, ,, 24 g.	20 10 0	..	21 0 0
,, ,, 26 g.	21 10 0	..	22 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	30 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	31 0 0	..	—
,, ,, 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g.	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g.	20 15 0	..	—
Best Soft Steel Sheets, 26 g. ..	22 10 0	..	—
Cut Nails, 3 in. to 6 in.	21 0 0	..	21 10 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
LEAD—Sheet, English, 4 lb. and up		42 0 0	..	—
Pipe in coils		42 10 0	..	—
Soil pipe		45 10 0	..	—
Compo pipe		45 10 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—				
Strong Sheet	per lb.	0 1 5	..	—
Thin ,, ...	,,	0 1 6	..	—
Copper nails	,,	0 1 5	..	—
Copper wire	,,	0 1 5	..	—
BRASS—				
Strong Sheet	,,	0 1 3	..	—
Thin ,, ...	,,	0 1 4	..	—
TIN—English Ingots ..	,,	0 1 10	..	—
SOLDER—Plumbers' ..	,,	0 0 11	..	—
Tinmen's	,,	0 1 2	..	—
Blowpipe	,,	0 1 4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.
,, fourths......	6¼d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral, white..	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 6
,, ,, ,, in barrels	,,	0 3 7
,, ,, ,, in drums	,,	0 3 10
Boiled ,, ,, in barrels	,,	0 3 9
,, ,, ,, in drums	,,	0 4 1
Turpentine in barrels	,,	0 4 2
,, in drums	,,	0 4 5
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	53 0 0
Red Lead, Dry	per ton	56 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots	per ton delivered	64 10 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

PATENTS.

APPLICATIONS PUBLISHED.*

4,886 of 1915.—Arthur Stephen Rogers: Clamping device for holding timber on a carpenter's bench or the like.

5,176 of 1915.—Thomas West: Hangers for casement windows.

5,283 of 1915.—Joseph Carlier: Machine for making setts.

5,419 of 1915.—Valentine Wright: Brick moulds.

6,950 of 1915.—William Henry Smith and Edward George Knapman: Ladders.

7,445 of 1915.—James Spelman: Concrete substructure caissons.

8,960 of 1915.—Frederick John Turner: Casement hinges.

9,281 of 1915.—William Dowdeswell: Device for locking together the blades of picks.

◆

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BOCKING.—For constructing a new sewer at Bocking, for the Rural District Council :—

M. Mortimer & Co.*	£350

GLASGOW.—Supplying air filters required in connection with new turbo-alternators, for the Port Dundas and St. Andrew's Cross Generating Stations, for the Electricity Committee :—

Davidson & Co., Ltd.	£562

GLASGOW.—Supplying fans for cooling towers at St. Andrew's Cross Station, for the Electricity Committee :—

Matthews & Yates*	£727

WESTMINSTER.—Accepted by the Westminster City Council for the supply of the following materials :—

Ballast and Sand.—H. Covington & Sons, Ltd.; H. Sabey & Co.

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Carriageway Repairs (Macadam) (Trench Repairs only).—J. Mowlem & Co., Ltd.

Carriageway Repairs (Granite Sett Pavement).—Bovis, Ltd.

Carriageway Repairs (Granite Sett Pavement), for Work Involving Excavation and Laying Concrete.—J. Mowlem & Co., Ltd.

Cement and Lime.—Wakeley Bros. & Co., Ltd.; Young & Son.

Footway and Channel (Mason's Work).—F. G. Brummell; J. Mowlem & Co., Ltd.

Granite (Broken).—Rowe & Mitchell.

Granite Setts, Kerb, and Channels.—A. & F. Manuelle.

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BETHNAL GREEN, LONDON, E.

STAINES.—Accepted by the Urban Di Council for supplying granite, tarred maca and granite chippings from April 1, 191 March 31, 1917. Mr. E. J. Barrett, A.M.Inst Surveyor :—

British Macadams, Ltd., Clee Hill granite, 14 per ton; Enderby & Stoney Stanton G Company, Enderby granite chippings, 12 per ton; Johnston Bros., Granomac 19s. 3 ton, matrix 19s. 9d.

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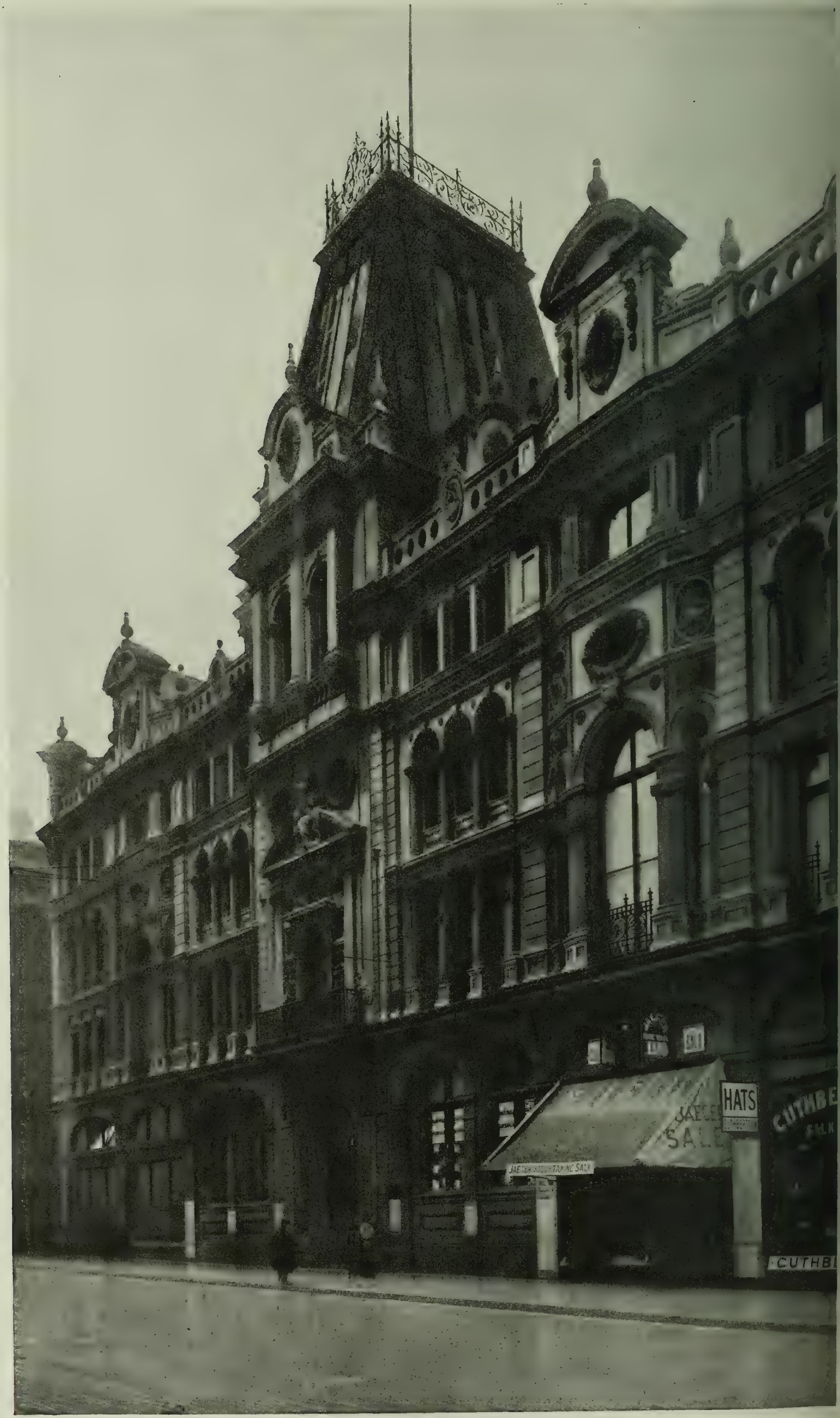

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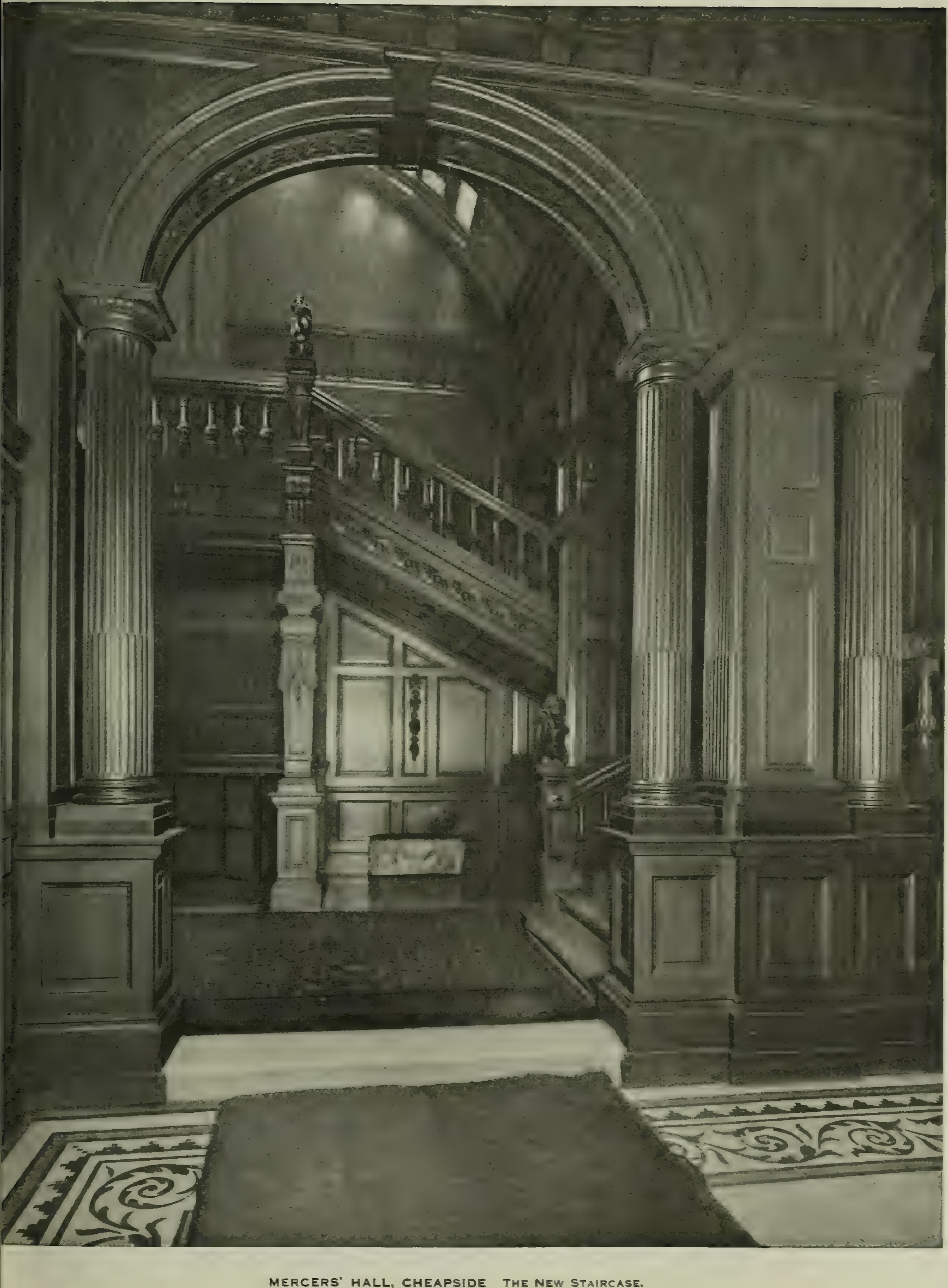

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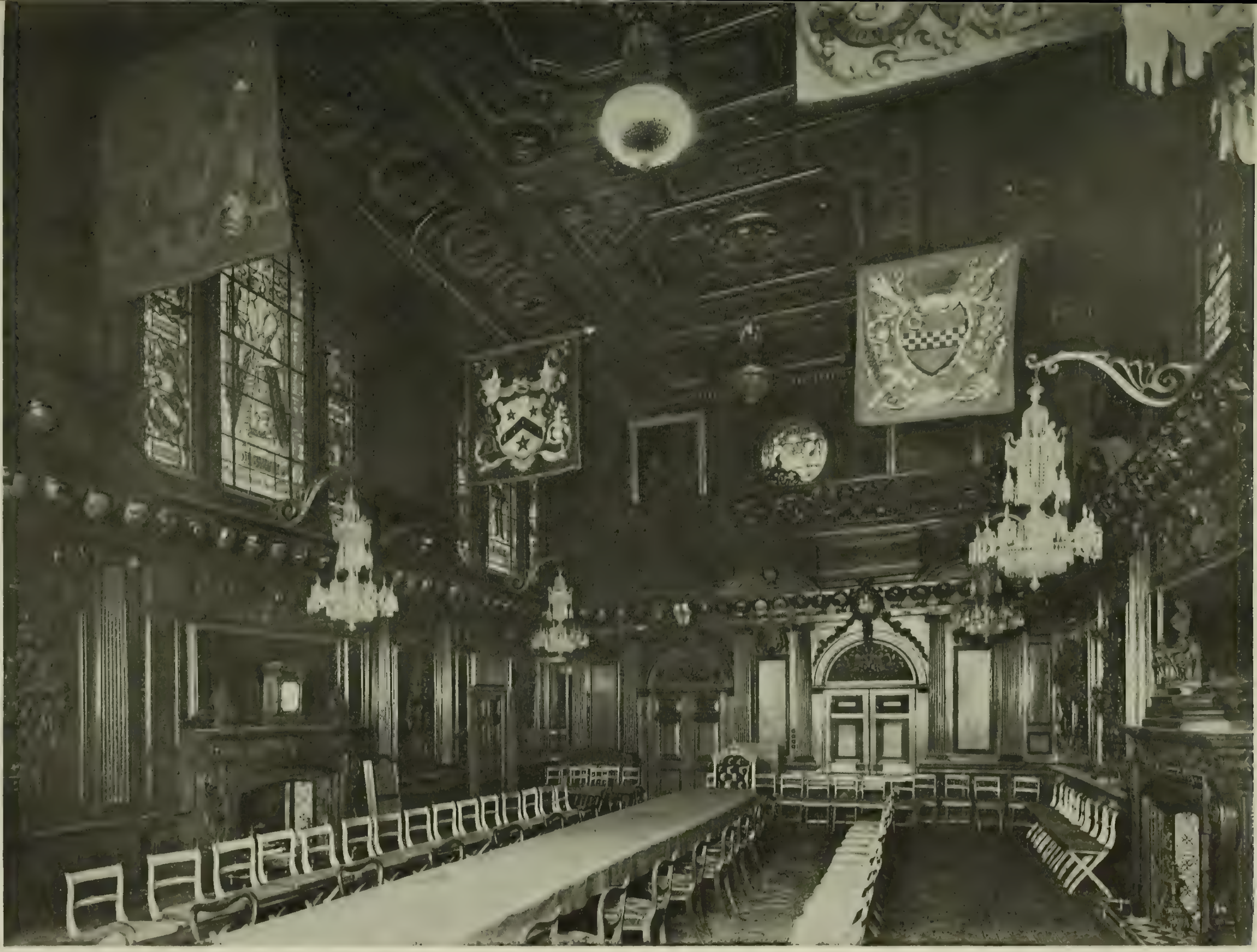

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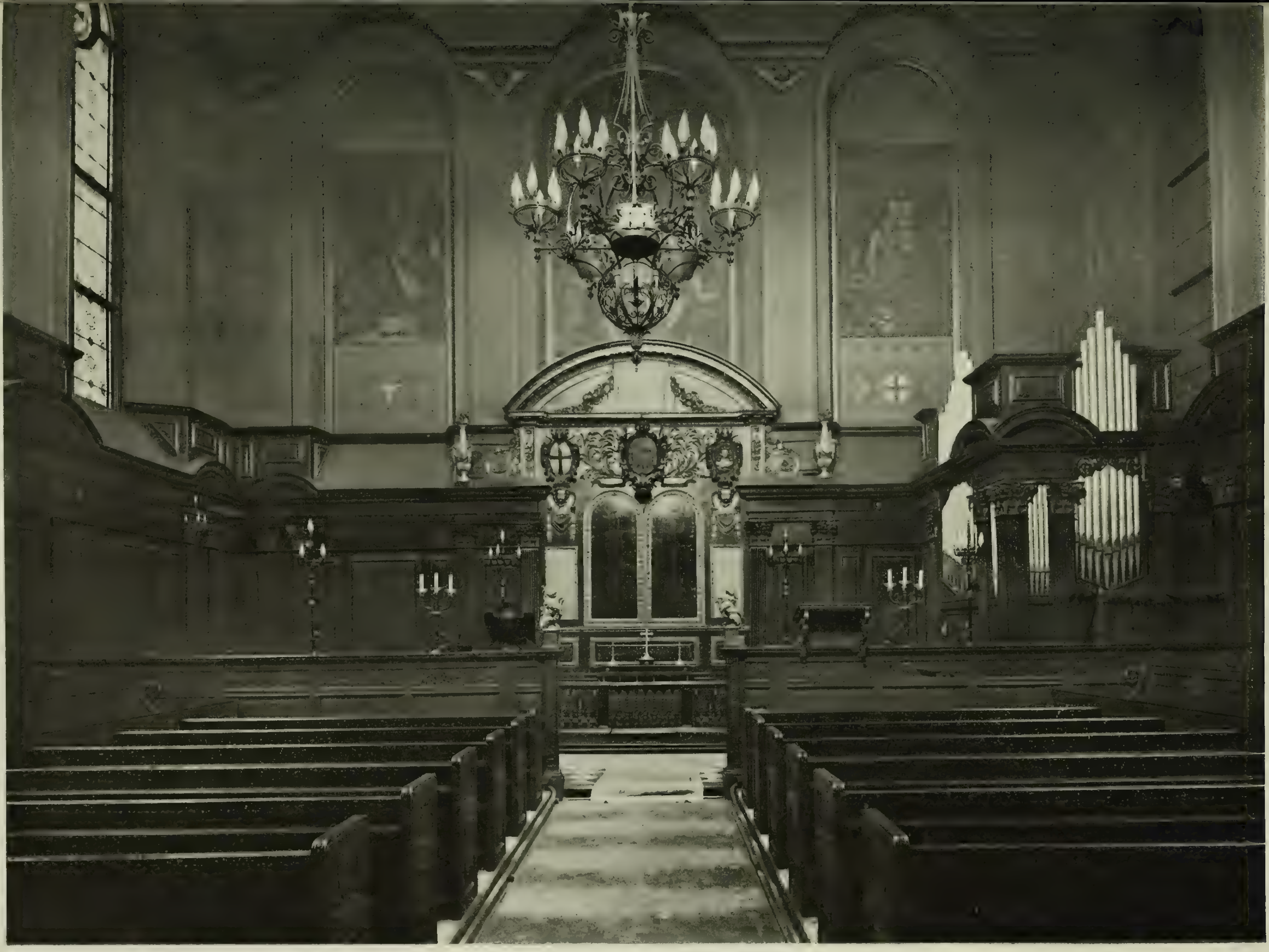

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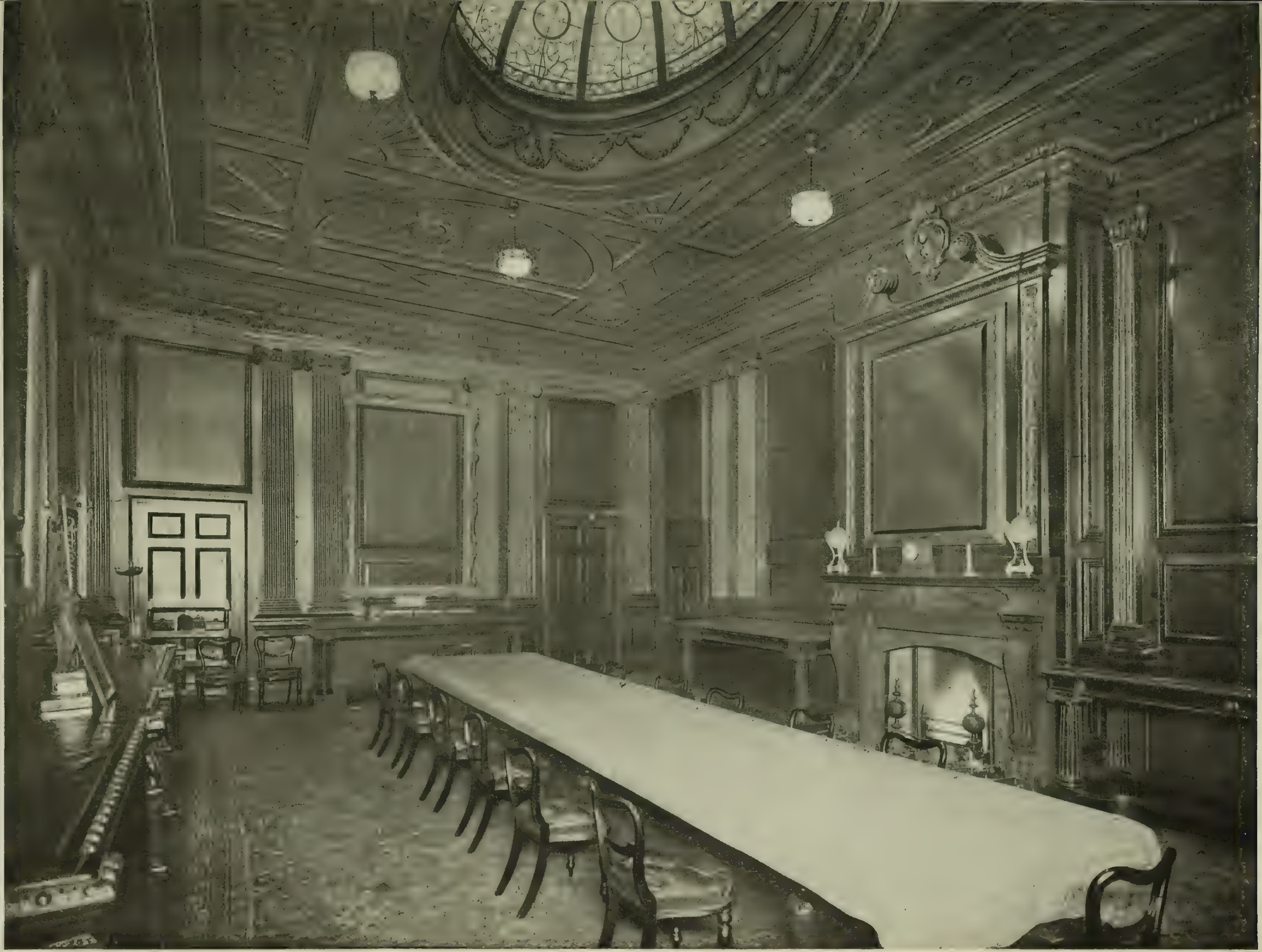

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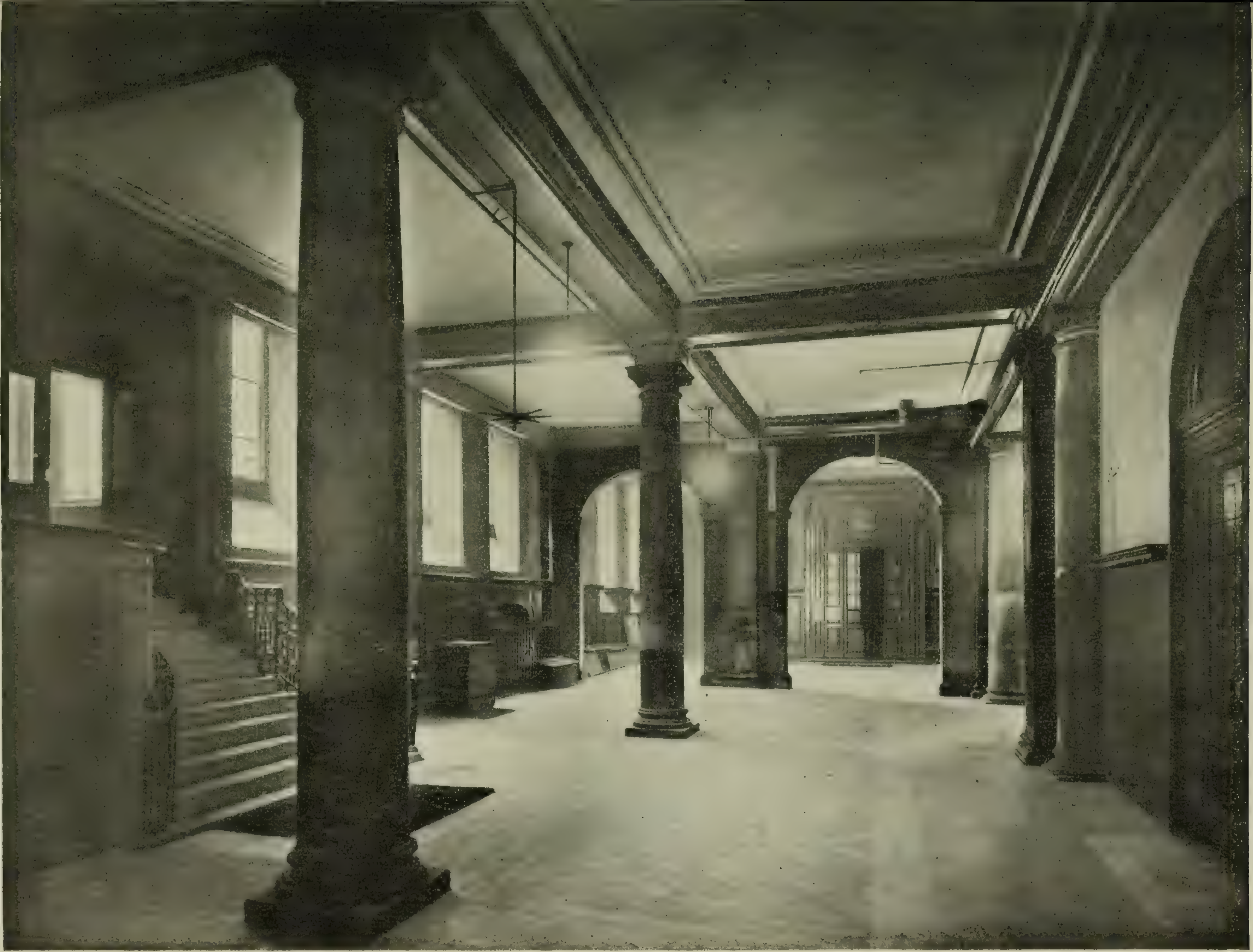

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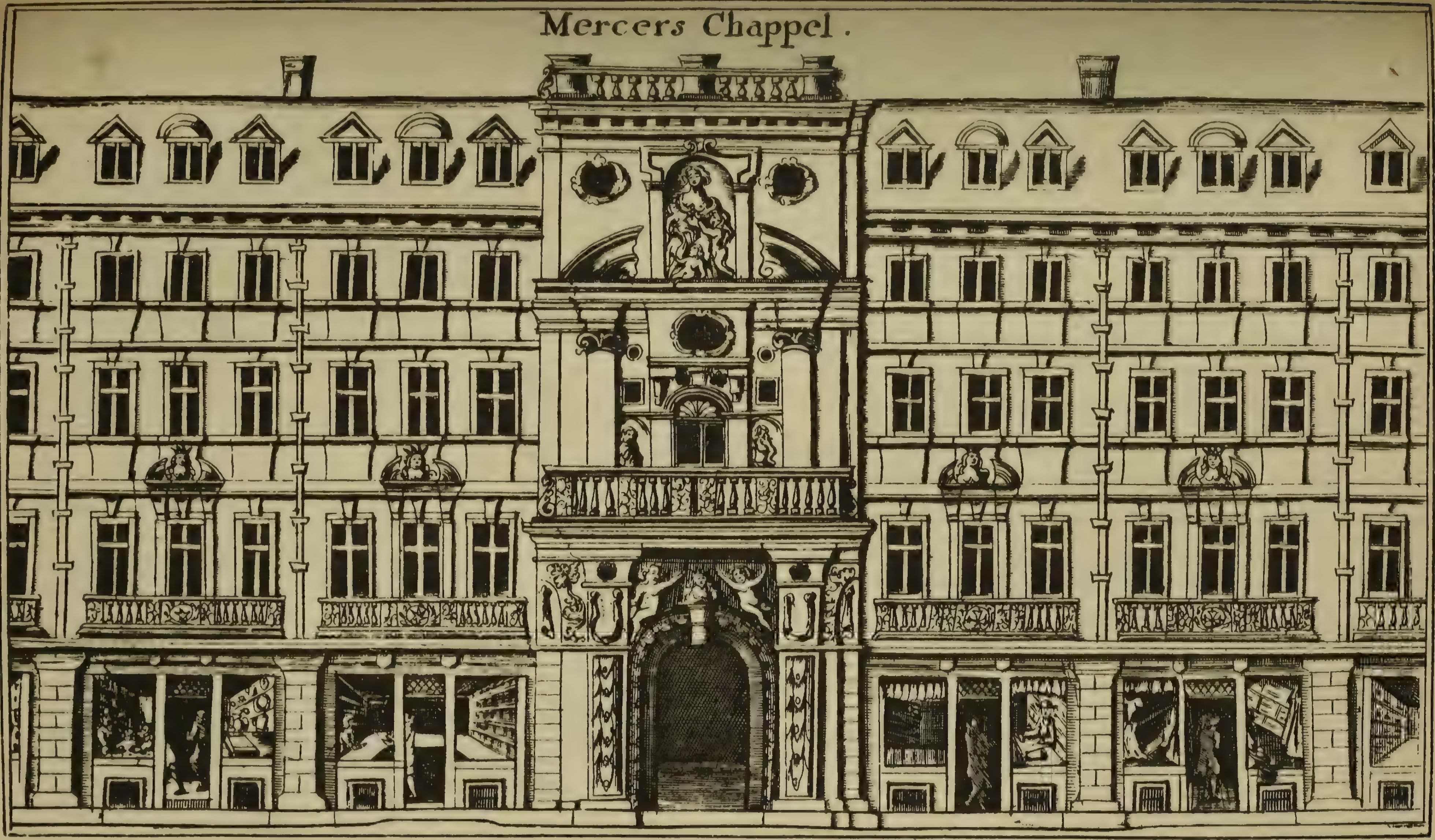
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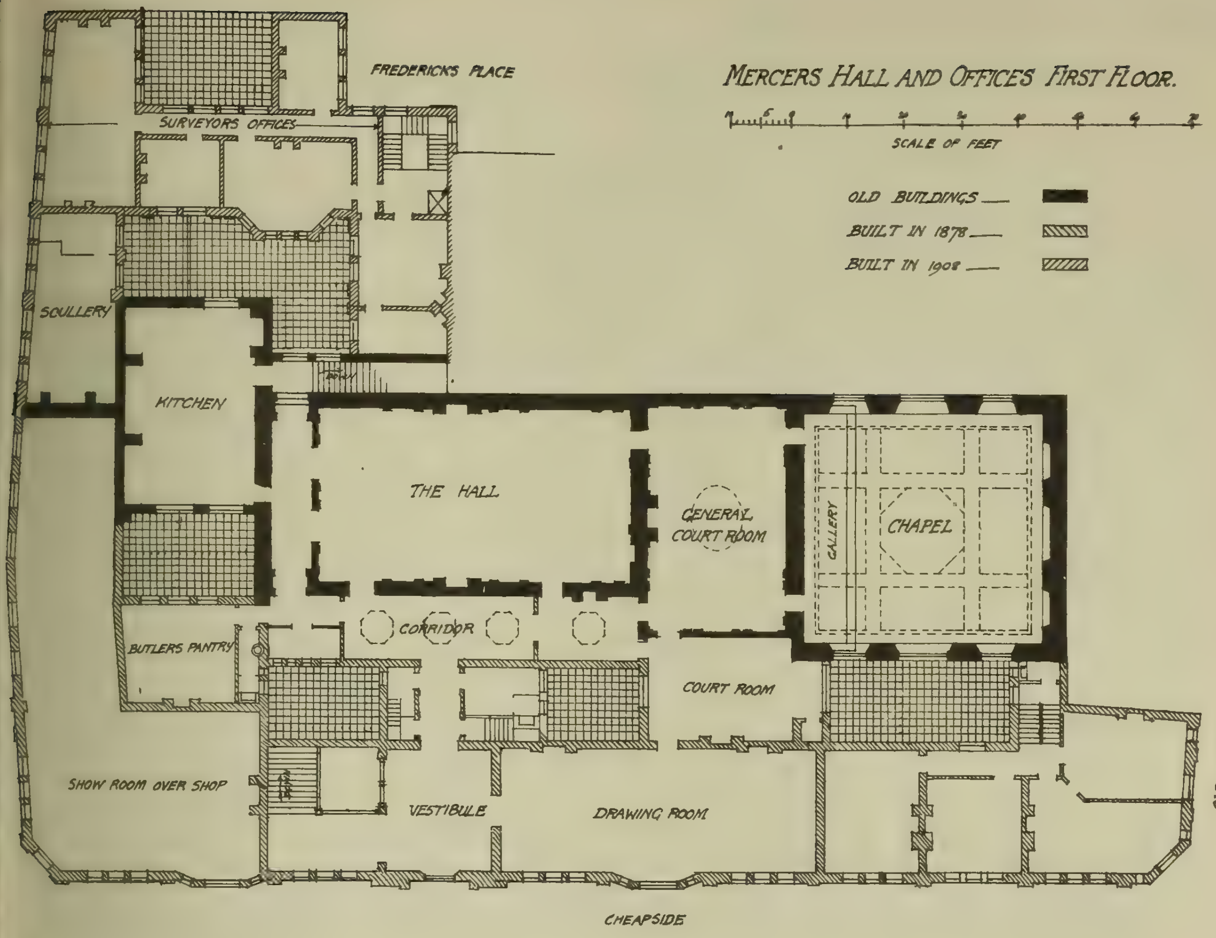

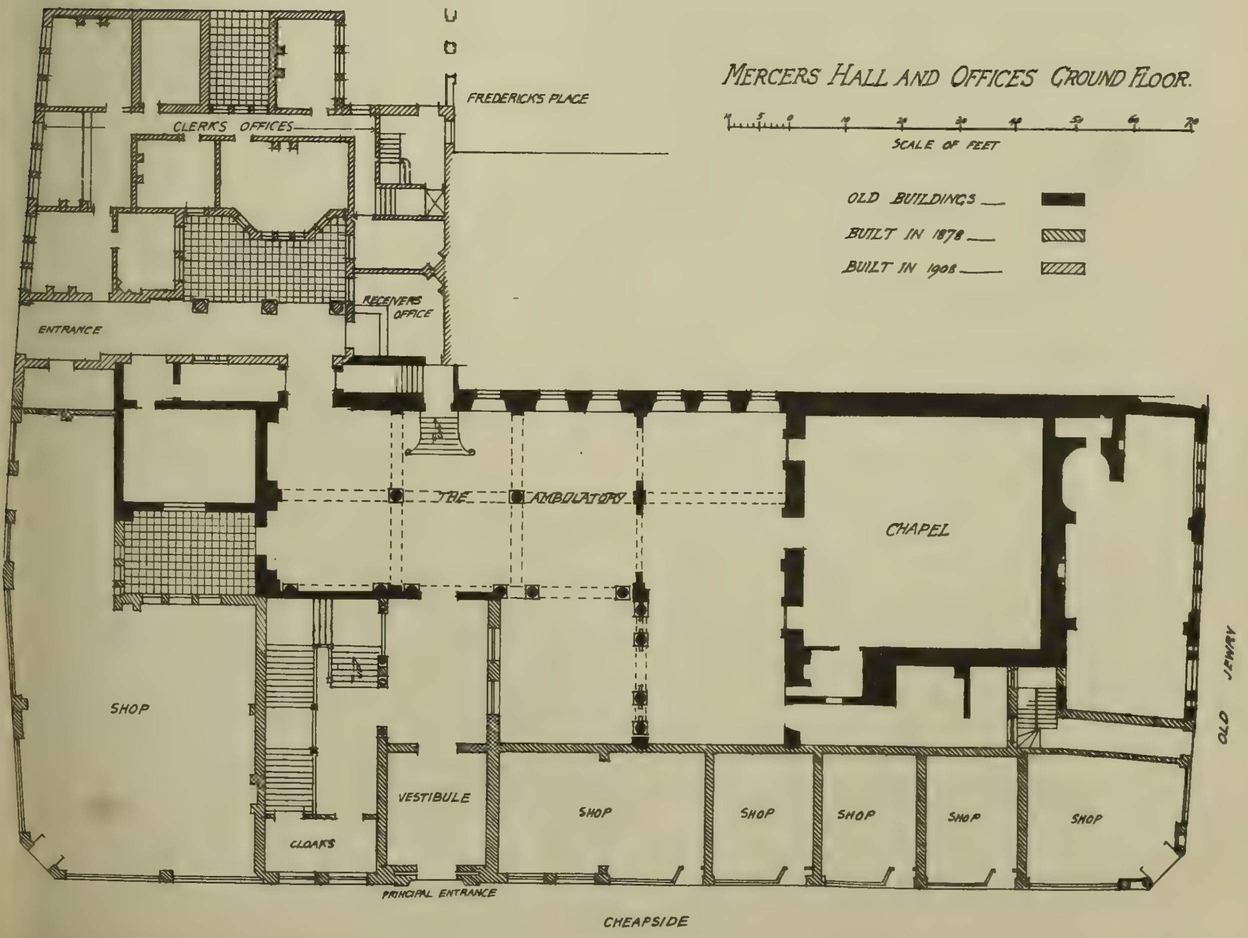

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APRIL 7, 1916.

THE ARCHITECT IN LITERATURE.

THE word "architect" does not occur in English until 1563, in which year John Shute, the dates of whose birth and death are alike unknown, published his "First and Chief Groundes of Architecture, used in all the Auncient and Famous ments," in the introduction to which he describes himself inter and architect, and mentions his studies under the rchitects in Italy, whither he was sent by the Duke of umberland in 1550. The next reference to the word, ling to the Oxford Dictionary, occurs in "Paradise Lost," century later, for the architect had not come to his own ently to be realised as a person in any of those books racters, such as Earle's and Overbury's, which were the t of the educated in the reigns of the first Stuarts; the Architect therefore does not balance the Bad in literature, ever he may have done in life. Inigo Jones, satirised e stage as Vitruvius Hoop, is described as "eminent in tecture," and this is in itself proof that the word "architect" s no recognised part of the vocabulary of the day. In n even the word is probably one of his own learned ngs; it had taken no hold when introduced by Shute, and not reappear after "Paradise Lost" until well on in the eenth century. Satan, in fact, is not only the earliest ple of the word in literature, but of the profession. The archangel, once "known In Heaven by many a towered ture high," recalls his powers in hell, and the growth of ew capital is described with a fierce power and bitter ration singularly striking in the case of a blind poet. It if the memories of Milton's early travels—of castles set on y Italian hills, of the overwhelming mass of St. Peter's— blended into one great and gorgeous vision. Nor would surprising, in the case of so stern an opponent of Rome, ilton had in his mind's eye the actual image of the vast edral when he wrote :—

> A fabric huge . . .
> Built like a temple, where pilasters round
> Were set, and Doric pillars overlaid
> With golden architrave; nor did there want
> Cornice or frieze, with bossy sculptures graven.

very doors "opening their brazen folds" suggest their han counterpart. Fancy might even take the lines further s symbolical of the Christian Gothic theory as against the ns borrowed from the Pagan temple, and contrast the wered structures high" which Satan had raised in Heaven the columns and architraves of Pandemonium, which could but be in a style the reverse of that celestial architecture :—

> Nor aught availed him now
> To have built in Heaven high towers; nor did he scape
> By all his engines, but was headlong sent
> With his industrious crew to build in Hell.

It is as if Milton's early love of cloisters pale and high owed roofs were taking its revenge on the unwilling recognion of the splendours of that great cathedral which to him the embodiment of Satan's kingdom upon earth, and on stately Neo-Classicism of a dynasty which he abhorred, Banqueting House of Whitehall, that fragment of a mighty n, and the Corinthian portico added to St. Paul's by the g, whose death-warrant Milton signed, in 1633.

Fantastic, then, as it may seem, we may regard Pandemonium the first capital, Satan as the first architect, of modern fiction, he has to wait long for a successor. The earliest novelists re interested in men and not their houses; one cannot agine Tom Jones as interested in architectural improvements, one of Smollett's heroes calling in professional advice, and n the first efforts of the romantic revival deal in buildings as they were, not as they were to be made. The Castle of Otranto is already built; so is that castellated erection in which much of the action of its little-known predecessor "Longsword Earl of Salisbury" takes place, while Mrs. Radcliffe's castles, including that which is chiefly known to modern readers by Miss Austen's allusions to Laurentina's skeleton, date back to a hoary antiquity. But the leaven was working; it is only a step from Gray's admiration of the ivy-mantled tower to his friend Mason's love of ruins for their own sake, and with Mason we at last come to another architect in literature. Mason's "English Garden" is not a work familiar in our mouths, but the activities of its hero Alcander, "an English country gentleman, as his name implies,"* are really noteworthy. On his "site" that worthy "first his taste employ'd," the "blank horizon" of the "sacred" site in question being only broken by a thin line of beech, whose "tameness" was thus done away with :—

> "Draw we round yon knowl,"
> Alcander cries, "in stately Norman mode,
> A wall embattled; and within its guard
> Let every structure needful for a farm
> Arise in castle-semblance; the huge barn
> Shall with a mock portcullis arm the gate,
> Where Ceres entering, o'er the flail-proof floor,
> In golden triumph rides; some tower rotund
> Shall to the pigeons and their callow young
> Safe roost afford; and every buttress broad,
> Whose proud projection seems a mass of stone,
> Gives space to stall the heifer and the steed.
> *So shall each part, though turn'd to rural use,*
> *Deceive the eye with those bold feudal forms*
> *That fancy loves to gaze on.*"

Filled with the idea of carrying out the beautiful scheme in the lines here italicised, Alcander proceeds to "build of old, disjointed moss-grown stone A time-struck abbey," whose prosaic purpose is to conceal the whereabouts of the dairy and the icehouse. The "fane conventual" accordingly arises, and Alcander proceeds to "lead his pensive maid" around its glories, and to propose the erection of a "proud rotunda" built of "forms pellucid," on "Ionic shafts"—*anglice*, a conservatory—which the maid, Alcander's "living goddess," viewed reluctantly after all, not, we regret to read, because of Alcander's bad taste, but because :—

> "My wish, thou know'st, was humble as my state,
> I only begg'd a little woodbine bower,
> Where I might sit and weep."

But we must leave these pseudo-pastoral love scenes for the creations of the Tilney family at Northanger Abbey, those admirable kitchen quarters, built by the general's father, which called forth Catherine's reluctant admiration, and that "tolerably large eating-room" which we are sure must have been a creation of General Tilney's own, with such modest pride does he admit it to be one of the necessaries of life.

"Northanger Abbey" was got ready for the press in 1803, though not published till 1817; thus it actually, though not apparently, preceded "Waverley," with its romantic joy in the picturesque domain of the Baron of Bradwardine, which would not, however, have called for mention here had not Waverley, who probably fulfilled Flora's prediction that he would "refit the library of Waverley Honour in the most exquisite Gothic taste, draw plans and landscapes, and write verses, and rear temples, and dig grottoes," rebuilt the whole after its destruction in 1745, as a surprise for his father-in-law the Baron, who promptly entails it on his second grandson, the first, who is to have Waverley Honour, being not yet even in sight.

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* Leslie Stephen.

Scott, however, greatest of antiquaries and most loving of archæologists, hardly comes into our purview, since his characters live in or near ancestral homes and are not themselves, like their creator, the architects of their own dwellings. Perhaps the earliest professional architect in literature—for the elegant Alcander was only an amateur—was Mr. Pecksniff, who held that proud position, not by virtue of qualifications or of practice, for he "had never designed or built anything," but by virtue of his brazen (Dickensian prose for brass) plate and his reception of the pupils who spent from three to five years "in making elevations of Salisbury Cathedral from every possible point of sight (*sic*); and in constructing in the air a vast quantity of castles, Houses of Parliament, and other public buildings." In so far as beginning his adult life as a pupil of Pecksniff's constituted an architect, Martin Chuzzlewit was one, but we are not told that the varied fortunes of that young man included any efforts at putting his profession into practice. If Pecksniffs were common at the beginning of the nineteenth century, we feel that Adam Bede, that admirable master-builder, was justified in his contempt: "As for th' architects, they set up to be fine fellows, but the most of 'em don't know where to set a chimney so that it shan't be quarrelling with a door. My notion is, a practical builder, that's got a bit o' taste, makes the best architect for common things; and I've ten times the pleasure i' seeing after the work when I've made the plan myself."

The function of the practical architect on which Adam Bede insists is explained and broadened by two novelists of our generation, Mr. Howell's architect in "The Rise of Silas Lapham," who knows what a woman wants in a scullery than she does herself, and Mr. Arnold Bennett's Card, wh course of his meteoric career creates a fitting house for h old mother, having previously bought up through a the lease of her hovel and turned her out in the *rôle* rapacious landlord in order to ensure her living in befitting her position as his parent; and so admirable new house prove that its unwilling tenant was constra admit that, servantless as she insisted on remaining, sh clean everything up and be ready for callers by ten We feel that there is a distinct opening for the modern life.

But we must retrace our steps and leave the light of Howells and Bennett for the more serious paths of in which the architect as a character is curiously infr It was reserved for Mr. Hardy, wise by his own experie treat the architect as hero. No one can help liking S Smith in "A Pair of Blue Eyes" any more than fated Elfrida who lacked the courage to be true to the excellent George Somerset of the "Laodicean, "sketched or measured many old country churches now down or altered." If more of our architects had th passion of Mr. Hardy and his heroes for the legacy of t the architect in fact might play a larger part than he fiction, and the restoration age of the Victorian era have been less unhappy than it was in the eyes of a gen that has grown as much beyond the ideals of a Scot Butterfield as it has beyond those of the forgotten Gothi of Alcander.

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NOTES.

The Atelier and the A.A. An exhibition of unusual interest was held at the First Atelier of Architecture on the last Wednesday in March. The occasion was the second joint exhibition and criticism arranged between the Atelier and the Architectural Association, the first having been held at the Association. The subject of the competitions was a National Library, and some extremely interesting and promising work was submitted. A "Mention" was awarded to Mr. Tomlins, of the Atelier, for a well-laid-out and characteristic design. This being the first visit of the Architectural Association, the visitors were briefly welcomed by Mr. A. R. Jemmett on behalf of the Atelier, and after the Patron, Mr. A. J. Davis, had given his criticism Mr. Stanley Hamp expressed the sympathetic attitude of the Council of the Architectural Association and their belief in the value of such joint competitions. The special interest of the evening was further enhanced by the fact that it was the last appearance of the Patron before leaving for active service in France. In making the announcement Mr. Davis expressed his very strong wish and hope that the Atelier would be carried on as usual in his absence. On behalf of the Beaux-Arts Committee Mr. Percy B. Tubbs expressed appreciation of Mr. Davis's services, and, in referring to the intention of the Committee to keep the Atelier running, pointed out the financial difficulty caused by the fact that all the eligible working members were absent at the war. Mr. Bucknell, representing the working members, voiced their thanks to Mr. Davis and their good wishes for his welfare while on active service. A memorable evening in the history of the Atelier was brought to a close with an enthusiastic send-off to the Patron, who was leaving for France next morning. We think that everyone who realises the necessity of progress in our methods of architectural education would be sorry if the Atelier was obliged to close for the remainder of the war. The reasons for making a special effort to keep the Architectural Association schools open apply with equal force to the Atelier, and we hope it will eventually receive assistance in like manner and from the same quarter.

A Change of *Rôles*. We hail with delight the excellent series of short architectural essays which the *Times* is giving its readers under the heading of "History at Close Quarters." The last of these is a very readable article on the "Opening of the White Tower." These incursions into the field of architecture are, we hope, an indication of the growing interest taken in buildings—an interest which is very marked in the *Manchester Guardian*, where from time to time good architectural criticism is to be found. At present these journals usually lack illustration, but that is a want which may be made good later on. But there may be room for a *quid pro quo*, and possibly architectural publications may in the future give leaders dealing with the political situation. The reconstruction of our Party system after the war would ~~be a~~ good subject for such a leader, and there would be a suggestion of fitness in advice on State reconstruction being found in an architectural work. Why, after all, should we not shake Cabinets and support political parties? Possibly if we did might see the last of that Old Man of the Seas, Mr. Lloyd contribution to our Land Acts! How a Government can take to itself for shutting up museums and picture-galleries on th of economy and persist in the administration of an Act which an annual loss and also chokes and stultifies legitimate tra speculation is more than we can imagine.

Traffic. Dr. Waldo, H.M. Coroner for the City and wark, calls attention in his annual for 1915 to the fact that a large number of from fires occurred during the year. He held inque sixty-three deaths from traffic fatalities, the highest num record since the introduction of motors, and adds that th cause of the increase is the absence of street lighting, owing conditions brought about by the war. The suggested remed (1) more street refuges, especially along wide streets where tra run; (2) more police, especially at traffic-crossing points; more lifeguards or fenders in the shape of side-guards for hind in the case of heavy motors. The first of these remedies i the expenditure of money by local authorities which, desirable, is probably not feasible at present; the secon represents additional expense; the third could be cover additional regulation; but all the recommendations should be into effect when normal times return. Mr. Waldo also calls att to the fact that a large hoard of Tudor ornaments and jewelle unearthed in the City and has been secured by the Treasury u secret arrangement with a person or persons. Fifty-two of ornaments are now at the London Museum, while others ha seen on view at the British Museum. Dr. Waldo says he is u nately not able to hold an inquest on these treasures, since the been removed out of his jurisdiction, but advises the Corporat bring a civil action for their recovery in order that they m deposited in the City of London Museum. According to the C the ornaments, under a Royal Charter (June 24, 15 Charles II. belong to the Lord Mayor, Commonalty, and Citizens of L and could be recovered by legal action.

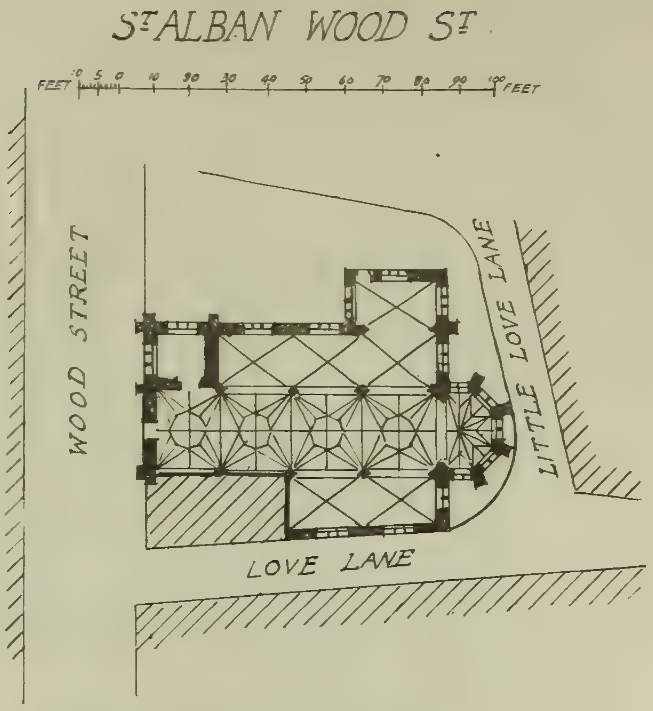
Fires. We are glad to see that Dr. Waldo says th of 169 City fires which occurred in the year the is unknown in respect of seventeen only. One of the total can be traced to a light having been thrown dow twenty-six to defective electrical arrangements. The Coroner su the extension of the system of the Special City Fire Inquests as was recommended by the Departmental Committee in 1909, there is special need of full and careful investigation into the ca fires at the present time. He points out that the fact that inquests are held has a deterrent effect on incendiarism, as an i provides additional machinery for detecting and punishing the Considering the proportion which fires caused by the careless thr down of lights bears to the total, it seems time that such pra were penalised, since they are quite as detrimental to the interests as the practice of spitting, which is now punisha exercised in public places.

LONDON CHURCHES WREN AND LATER CHITECTS OF THE NAISSANCE.

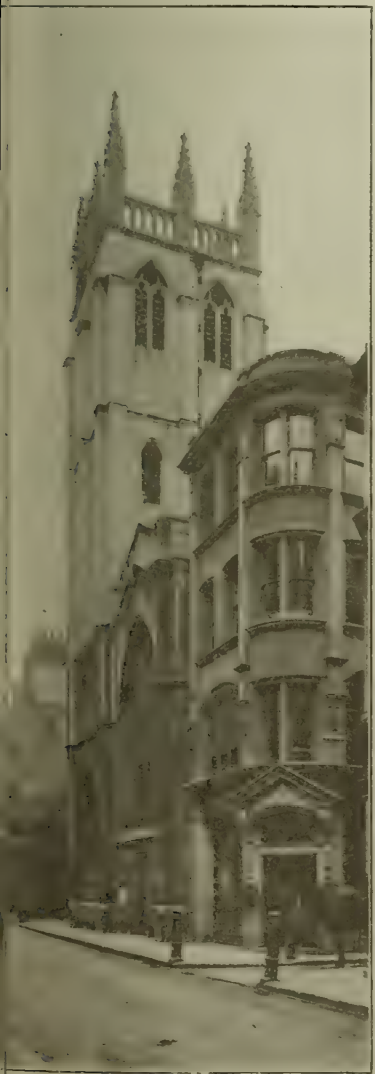
. XXIV.—St. Alban, Wood-Street.

t. Alban, Wood-street, is often included lists of Wren's churches, it has a place series; but an examination will show hile it is one of the churches which ebuilt under Wren's direction, it is evident that either much of the older re remained and gave its character to church or it must have been the work aster mason unusually conversant with ails of the former structure. It cannot, . Michael, Cornhill, or St. Mary Alder- be described as being pseudo-Gothic, in plan and design an example of very rpendicular, of which the weakness and f vigour paved a way for the coming of type. It had been rebuilt under ection of Inigo Jones only thirty years s to the Fire, and the church we see is undoubtedly the restored copy of what obably one of the last works of the period.

s unfortunately been much modernised erefore rendered less interesting to the of style, a polygonal chancel termina- modern date replacing a former square with a large window; the walls have ripped of their panelling, and the pulpit ly a few monuments mark the date of ilding. The tower and west window are the most pleasing features of the church, which should be compared rather with St. Helen, Bishopsgate, and St. Katherine Cree than with Wren's work.



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)



[Photo.: Geo. Trotman.

n's Churches: St. Alban, Wood-Street.

The original church was a very ancient one, tradition relating that King Offa had a palace in Wood-street of which the church was the chapel, and that he granted the parish to the Abbot of St. Albans. At a later date the advowson passed into the hands of the Provost and Fellows of Eton College, who have since continued its patrons. With the church is united the parish of St Olave, Silver-street, which was not rebuilt after the Fire.

No. XXV.—St. Andrew, Holborn.

The appearance of St. Andrew, Holborn, has been partially spoilt by the raising of the roadway when Holborn Viaduct was constructed. The first church on the site was in existence in the year 971, as it is mentioned in a charter of King Edgar defining the boundaries of the parish of Westminster. It was rebuilt in the fifteenth century, repaired in the reign of Charles I., and was finally rebuilt by Wren in 1686. The original tower was left, but was subsequently recased with Portland stone in 1704. Some of the original Gothic arches still remain. The church is one of the largest of the galleried churches designed by Wren, and one of the most commonplace and uninteresting. It has been extensively restored and modernised, and the original organ has been replaced. The tower is simple and pleasing in design, and in its form suggests a very usual Gothic type.

There are many interesting associations connected with the church, which is said to be the burial-place of John Webster, the dramatist. Sir Edward Coke, the famous lawyer, and John Hutchinson, of the Parliamentary Army, were married in it; while a memorial to the comedian, John Emery, who died in 1822, states, "Each part he shone in, but excelled in none So well as husband, father, son"; while Benjamin Disraeli's name appears among the entries of baptism. The advowson of the church is in the gift of the Dukes of Buccleuch.

It is disappointing that in so many of his larger churches Wren should have fallen back on somewhat commonplace solutions, but his powers of design were evidently at their best when he had to face exceptional difficulties caused by site or the circumstances attending unusual constructive problems.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS:

FACTORIES AND WORKSHOPS.

A MEETING of the Institution of Municipal and County Engineers was held in the Town Hall, Acton, recently; Mr. H. J. Wakelam, M.Inst.C.E., County Engineer of Middlesex, President, presided.

Mr. F. Sadler, Surveyor to the Acton authority, read a paper on the "Duties of a Municipal Engineer in connection with Factories and Workshops." After speaking of the dual control of factories by the officers of the local authority and by the factory inspectors of the central authority, which was apt to lead to confusion and overlapping, as it was also a source of irritation to the occupiers of factory premises, he summarised the duties of the municipal engineer as follow:—

(1) The examination of plans of new factories and workshops, or additions and alterations to existing ones, and the supervision during construction, to see that the buildings are erected in accordance with the Public Health Acts and the building by-laws and regulations in force in the district.

(2) The inspection of factories and workshops, to ascertain whether there is sufficient and suitable sanitary conveniences for the employees.

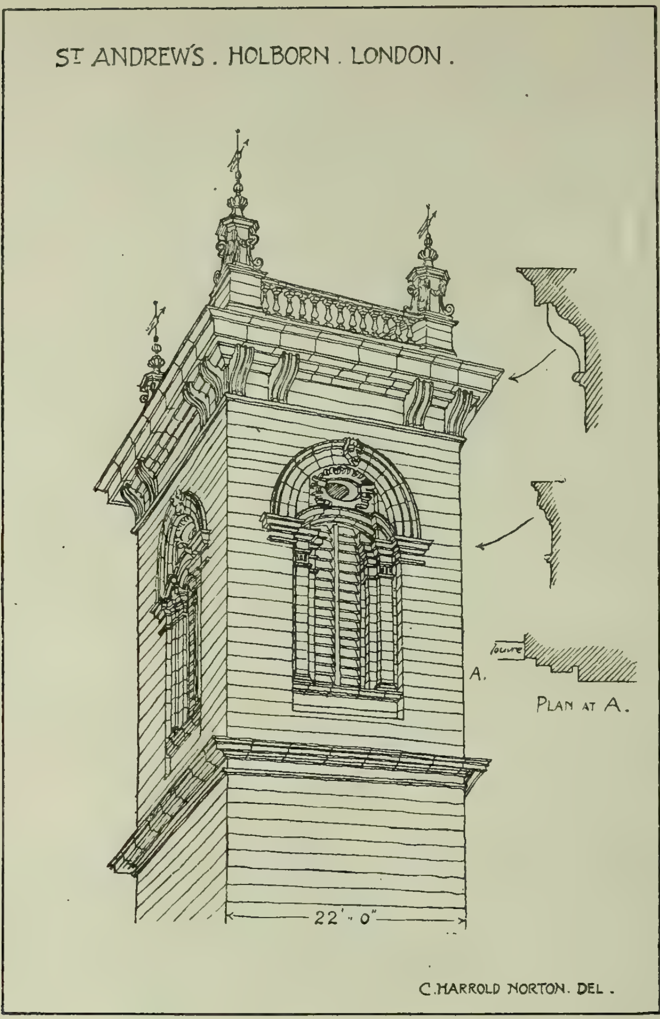
(3) The inspection of all factories and workshops wherein more than forty persons are employed, to see that they are provided with such means of escape in case of fire for the persons employed therein as can reasonably be required.

(4) Inspection with a view to preventing any injurious matters entering public sewers from factories and workshops.

(5) The inspection of factories and workshops where petroleum is stored with a view to licences being granted by the Council.

With respect to the erection of factories and workshops, he said the erection of such buildings in a district must conform to the building by-laws in force therein.

It would accelerate and regularise these methods of building if the Regulations and section of the Act, which are based on many years' experience and settled after careful deliberation and collaboration by experts, were made applicable to the whole country, either by a general Building Act or by means of by-



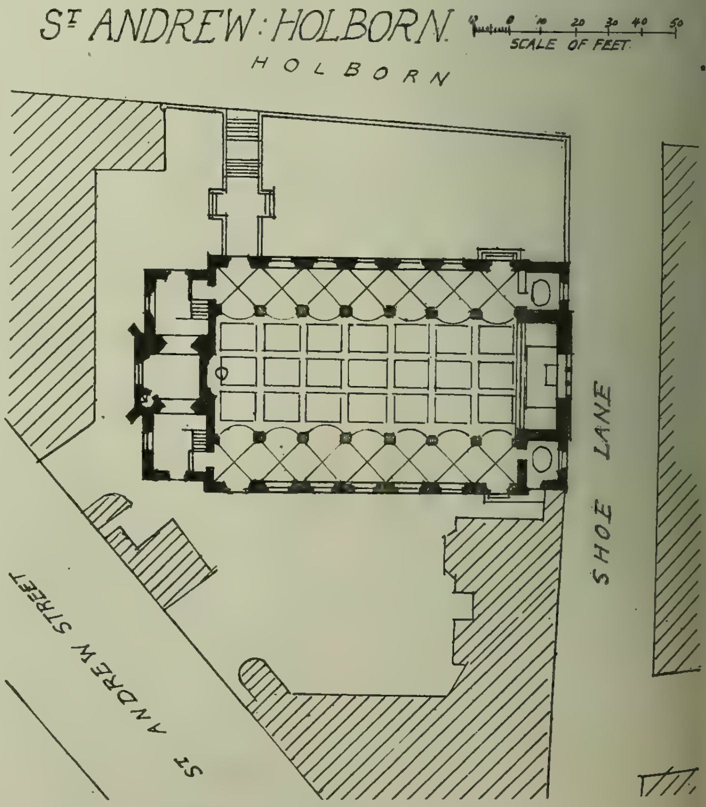
laws. The latter method would be preferable. The Regulations require plans and sections to be deposited of sufficient detail to show the construction of the proposed building, together with a copy of the calculations of the loads and stresses to be provided for and particulars of the materials to be used. The adoption of these Regulations by urban and rural councils would add materially to the work and responsibility of the Surveyor both in the examination of deposited plans and particulars and also in the supervision of the work, but it would clear away an anomalous position of affairs.

Mr. R. Brown (Southall) said the question of factories in districts around the Metropolis was a most important one. Acton was not the only place by any means where factories were going up *ad lib.*, and they were all met with the difficulties which Mr. Sadler had mentioned in his paper. In dealing with factories generally, it must be a matter of policy as to whether factories should or should not be allowed in any particular district. When a council decided to put in force the Town Planning Act and decided to develop a district partly for factories and partly for residences they must be prepared to accept and take the advantages and disadvantages of those factories. As to by-laws to allow the erection of buildings other than brick or stone work, such as concrete and steel-framed buildings, he warned Mr. Sadler as to adopting the London County Council Regulations for reinforced concrete buildings unless he obtained the whole of the powers given by the Act which permitted those regulations to be made. He did not think any reasonable local authority would object to their erection so long as they were designed by responsible engineers and supervised by proper men. Once they had in black and white the right to erect these buildings they had the responsibility of seeing they were subject to proper supervision. If a district allowed a factory to be erected, then it ought to be compelled to take the waste from the factory. It ought not to allow a factory to be erected and then refuse to take the waste.

Mr. E. Willis (Chiswick) considere
paper to be opportune at a moment w
many factories were being erected for m
works. With regard to the mixed supe
of factory buildings by the Public
Department, the Municipal Engineers' I
ment, and the Government Factory Ins
he thought it a pity that there should b
than one authority. Supervision wa
crux of the whole matter in regard to rei
concrete buildings. If a structure wa
designed and the erection of the buildi
thoroughly supervised there was very
danger of its ultimate future. His own
gave temporary licences for these bu
under the 1907 Act for varying periods,
ing to the nature of the building. Un
licence they had power to give notice o
drawal in the event of the building s
signs of weakness. There had up
present been minor settlements, but r
requiring the withdrawal of a certificat
to the danger from fire, the trouble was
much with new buildings, but with ad
to old buildings, which blocked up op
This required constant supervision. H
from 200 to 300 factories under supe
and there had been structural alteratio
minor character required in about half
buildings. He was not in agreement w
Brown, that a factory should have th
to discharge its refuse through the se
the council. Why should one facto
entitled to do great injury to the ratep
There must be some means of mec
separation or filtration of dangerous
entering through the sewers.

Mr. A. E. Collins (Norwich) said his
had hundreds of factories surround
houses. It was a most inconvenient a
ment for workpeople going to and fro.
absolutely imperative to have by-la
dealing with these places. They wer
pletely hemmed in, and it was imposs
get additional exits. In many cases it w
necessary to go the length of putting u
forced concrete, as corrugated-iron bu
were quite sufficient.

Mr. H. York (East Barnet Valley) sa
working of the 1907 Act appeared to hin
a travesty of the law. Many of these bu
were not temporary—they were inten
remain there as long as they would hold to
Therefore the authorities were not
their rights in granting licences.



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.) (*See page* 261.)

NERAL NEWS.

Greenock Housing.

special meeting of Greenock Corporation agreed to appoint four councillors and ster of Works as a deputation to the ice of the National Housing and Town g Council to be held in London from 1 to 14. Provost M'Millan stated that result of the last housing inquiry at k they were already committed to an ture of about £100,000, and as soon as was over no doubt the Local Government would again press upon them the y of looking after the needs of the in the way of new and better housing odation.

The White Tower, Salonika.

the Army Headquarters at Salonika Ward Price sends some interesting specting the White Tower. He says :— ika is passing through a period of Even the White Tower itself is being ised. From the time the Venetians 500 years ago until the Turks left it in t Balkan War it was an object of well- d awe. The grim old tower is now no ormidable than the Crimean cannon l in English corporation parks. Electric d water are laid on inside. The battle- are used by our sailors for a signal On the second story of the Tower English institution is installed. The around Salonika is rich in archæological , and has never been properly explored. lied armies decided to take steps to the relics that they found for the of the Greek Government, to whom iscoveries naturally belong. A well- English professor of archæology was ready as a lieutenant in the R.N.V.R., was put in charge of the collection of finds, which he is arranging as a local ogical museum in the White Tower."

British Columbia Timber.

rsuance of the policy of market expan- the interests of the lumber industry, ken by the Hon. the Minister of Lands, , British Columbia, two further bulletins, d for the information of lumber con- have recently been printed. They titled "British Columbia Douglas Fir ion" and "British Columbia Western ne" respectively. The former publica- als with the qualities of Douglas fir for ral purposes. The bulletin is well ted, the claims to durability being ed by pertinent references to such gs as the Craigflower Farm near Victoria, in 1851, and the Craigflower Public built in 1853, Douglas fir having been hroughout except for the roof of red hingles, and practically no parts of the gs having had to be repaired. Modern Douglas fir for structural purposes are ed by reference to the Arcade Building vernment and View streets, Victoria, in 1915, and the new Wharf Reception Canadian Pacific Railway Dock, ver. Another reference is to the Gulch trestle on the Esquimalt and o Railway, built in 1896. Four hundred g, 120 ft. high, and on a 10-deg. curve, ing three-quarters of a million feet of s fir, the trestle was still in excellent on and good for further years of service t was abandoned sixteen years later, to the alteration in grade. The wood variously as Western Soft Pine, in Western Pine, Arizona White Pine, lifornia White Pine is described in a manner in the publication, "British ia Western Soft Pine." This pine, is distributed throughout the southern of the province, is equal in working nishing qualities to the well-known White Pine, and is now being sold for ne purposes in the same markets. Its r dimension and framing timber, siding, and exterior finish, ceiling and par- work, sash and doors, turnery, patterns, terial, cooperage, etc., are touched upon text, while all processes of conversion strated.

Painter-Stainers' Hall.

The Painter-Stainers' Company held a luncheon on Tuesday, March 28, on the occasion of the completion of alterations and additions to their Hall, which have been carried out by Mr. Searles-Wood, F.R.I.B.A. We hope to have an opportunity of describing the work done in detail in our series of numbers dealing with the City Companies and their Halls, merely saying here that the work has been well considered and excellently carried out, and reflects credit on the Company and their architect. A collection of the original charters of the Company, including those granted by Elizabeth and James II., were on view in the fine Courtroom, and the assembled company, which included the Lord Mayor of London and the High Commissioners of Australia and New Zealand, had lunch in the Livery Hall, after which several excellent speeches were delivered.

Rodin's Sculptures.

A Reuter telegram from Paris states that M. Rodin has now made over his collection to the Government by deed of gift, together with the Palais Biron, where these works are assembled, which will shortly be opened to the public under the name of the Musée Rodin. The sculptor retains his studio in the building, but all the rest of the extensive building and its grounds with all their artistic equipment becomes public under Government supervision. It may be recalled that in 1914 M. Rodin gave to the British nation twenty examples of his work, including a replica of the famous group, "The Burghers of Calais."

Statue to Nurse Cavell.

Two years will be occupied in the completion of the memorial to Nurse Edith Cavell, for which a fund is being raised by the *Daily Telegraph*, but the bust which Sir George Frampton has first made, as a preliminary to the statue, has been sent to the Royal Academy. The site for the memorial is the island in the middle of the road opposite the National Portrait Gallery. The memorial will face south, and, being of a commanding height (33 ft.), will be seen from Trafalgar-square and even Whitehall. The figure of Edith Cavell, in nurse's uniform, will look towards Charing Cross Hospital, the white marble statue, 8 ft. in height, being outlined against a silvery-grey granite column. This monument, something of an obelisk in shape, will be crowned by the figure of Justice and Humanity seated, a sword across her knees, guarding an infant. The chair of Justice will have great arms which jut out on either side, so that in the distance the monument will bear the semblance of a cross, the nursing symbol. At the back a lion, in white marble, stamps upon a serpent.

Scientific Research.

At a meeting of the Council of the Institution of Municipal and County Engineers, held at Westminster on the 18th ult., it was reported that representatives of the Institution had met representatives of the Research Council, and that the question of scientific research in connection with the following subjects was discussed, viz. :—

1. The utilisation of a larger proportion of the calorific value of house refuse than is possible with apparatus and methods at present in operation, either by (*a*) an improved form of destructor, (*b*) the production of power gas from crude or disintegrated refuse, or (*c*) some other means.
2. The utilisation of tins by the introduction of a simple and effective detinning process and other improved methods of treatment.
3. The more thorough utilisation of clinker from refuse destructors.
4. The utilisation of sewage sludge.

The representatives of the Research Council stated that they would be willing to discuss, at a later date, any definite detailed scheme the Institution might put before them, dealing with the utilisation of house refuse and clinker, but they suggested that, in the first instance, the Institution should collect, tabulate, and analyse as far as possible, full information as to what has already been done in this direction. On the question of sewage sludge, it was also suggested that the Institution should collect information with a view to the drafting of a comprehensive scheme for research work.

The *Punch* War Cartoons.

An exhibition of the original drawings for *Punch* cartoons on the war by Bernard Partridge, L. Raven Hill, and F. H. Townsend will be opened on Saturday, April 8, at the Leicester Galleries, Leicester-square.

A Chamberlain Memorial.

A memorial bust of Mr. Chamberlain, which has been erected in Westminster Abbey by private subscription of a few intimate friends, was dedicated on Friday last week. Mr. Balfour performed the unveiling ceremony. The bust is by Mr. John Tweed, and is placed on the north side of the Abbey, near the monument of the late Lord Salisbury.

Standardisation.

At a meeting of the Standardisation Committee of the Institution of Municipal and County Engineers, held on March 18, a letter was read from Mr. J. S. Pickering, drawing attention to the standard form issued to members of the R.I.B.A., and suggesting that the Council should issue a similar form to the members of the Institution. It was resolved to recommend that a copy of the R.I.B.A. Form of Articles be supplied to each member of the Committee before the next meeting.

Industrial Progress and State Aid.

At the annual meeting of the Society of British Gas Industries on March 29 Mr. H. M. Thornton, the Chairman of the Council, delivered an address on "The Industrial Outlook and its Relations to the Gas Industry." Speaking of the proposed State assistance in industry he said: "I am not enamoured of the proposal to create a new Ministry of Industry and Commerce independent of the Board of Trade. In the multitude of Ministers there is weakness. I would prefer to see instead an enlargement of the Commercial Branch of the Board of Trade, which has done much valuable work during the war. I would like to see that branch extended so as to be an industrial and commercial department of the Board, and strengthened by being put under the control of a council of a few—a very few—men of wide business experience and proved business capacity, with adequate salaries and required on appointment to relinquish all business connections. . . . It is imperative that the administration of the Department of Industry and Commerce should be kept free from party influences and be carried on by business men on business lines. . . . In short, we want a State Business Building Department, with the time, ability, and power to organise to the full the maximum output and export of our various industries."

The British Fire Prevention Committee's Warning Service.

The British Fire Prevention Committee's fire warnings, which have been issued since the outbreak of war, cover a number of matters that require the attention of the public with the object of reducing the ordinary fire waste, as also points which will assist them in meeting the air raid danger. In addition to these general notices which have been made available to the public numerous special warnings have been issued by the Committee to meet individual interests, such as those of the hospital manager, the schoolmaster, the theatre owner, etc. Turning to the air raid danger, the Committee's warning No. 17A appears to be the favourite, and their circulars No. 18A or No. 18B refer to the general air raid question and the ordinary householder's aspect respectively. There are a number of special notices which are only issued to the proper competent authority or responsible applicant writing over his own signature from his regular address. No. 24 is only issued to ministers of religion in charge of places of worship; No. 20 only to education authorities, headmasters, and headmistresses of elementary and secondary schools; and No. 21 to managers of theatres, music halls, and cinema houses. Application must be made in writing with a large-sized stamped and addressed envelope enclosed for the reply. Requests should be addressed to the Registrar, The British Fire Prevention Committee, 8, Waterloo-place, London, S.W., and both the nature of the notice and the reference number of the warning must be given.

CHADWICK PUBLIC LECTURES.

In the concluding lecture of the series of Chadwick Trust Lectures on "The Domestic Arterial System," delivered on Wednesday, March 29, at the Household and Social Science Department, King's College for Women, Campden Hill-road, Kensington, Mr. John Slater, F.R.I.B.A. (Chadwick Trustee), in the Chair, Dr. Charles Porter dealt with warming and lighting. In connection with the former he criticised the methods usually adopted, and referred to the various advantages claimed for, and the disadvantages urged against, coal, coal gas, and electricity as heating agents. He expressed the view that of the three that which most deserved the claim of being a hygienic heater was undoubtedly electricity. As regards safety, cleanliness, and convenience it was ahead even of gas, in favour of which so many claims were advanced. In the matter of cost he showed that, so far as electricity was concerned, installation was the great trouble; but where there was choice in any house between coal, coal gas, and electricity he advised that it should fall on the last-named. The many advantages of central heating were also referred to, and it was made clear that much could be said in favour of its adoption even in the case of ordinary-sized houses. The cost of installation probably deterred many from resorting to it, though possibly the fact that, comparatively speaking, the temperature of London is so equable may induce a feeling that complete house heating is unnecessary.

The problem of the kitchen range was touched upon, and the suggestion was offered that in these days of gas and electric cookers and hot water heaters it might very conveniently be abolished. One of the great difficulties in the way of abolition was the necessity for a fire in the kitchen. In this connection an appliance specially designed for use as a combined sitting-room fire, cooker, and water-heater was described and greatly praised, being cheap to purchase and install while economical and efficient in use.

In relation to lighting, the ordinary artificial agents were described and their comparative advantages and disadvantages considered. The methods of installation were indicated, and a number of slides and models shown. In the view of the lecturer, electricity was the only hygienic artificial lighting agent. In regard to natural light the fact that the most effective light came through the upper part of the window was indicated, and a number of objections, in regard to safety and comfort chiefly, were shown to exist to the practice of bringing the window too close to the floor level.

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OBITUARY.

Mr. C. Hadfield.

Last week we announced the death, on March 23, at his residence in Norfolk-road, Sheffield, of Mr. Charles Hadfield, aged seventy-five years. He was the son of the late Matthew Ellison Hadfield, of Sheffield, architect, and the representative of the old Derbyshire family of Glossop, who latterly were of Lees Hall, Simmondley. His father, with whom he was associated in practice, was closely connected with the management of the local estate of the Duke of Norfolk. Mr. Hadfield was educated at St. Cuthbert's College, Ushaw, Co. Durham, and was a pupil of John Gray Weightman and of George Goldie. He was elected an Associate in 1863, and a Fellow in 1872, of the Royal Institute of British Architects, and served as a member of Council 1896–7; he received a certificate of competency to act as a building surveyor under local Acts of Parliament. He was a co-founder, in 1886, and Fellow, Past-President (1896–7), and Vice-President of the Sheffield Society of Architects and Surveyors. In 1897 he took into partnership his son, Mr. Charles Matthew Hadfield, under the style of Messrs. C. & C. M. Hadfield, of Sheffield. He was many years a member of the old Council, Sheffield School of Art; he succeeded his father as treasurer and co-manager of St. John's Institution for the Deaf and Dumb, Boston Spa, and he was President of the Sheffield Committee of the Society of St. Vincent de Paul.

Mr. Hadfield was largely employed upon ecclesiastical and other buildings, which he designed chiefly after the Perpendicular or Tudor manner for the Roman Catholic community, to which he belonged. Still, as our own columns testify, his professional labours were by no means confined to that field. With his father he was the architect of the Roman Catholic Churches of St. James, Marsh-lane, Liverpool (March 27, 1886, interior*), and St. Ignatius, Preston (October 2, 1886*). He was the architect of the Roman Catholic Churches of St. James, Bootle, St. Vincent, Sheffield (new aisle), and, with his son, of St. William, Banner Cross, Sheffield; and of St. Anne, Buxton—interior decoration, with marble floor and mosaic pudelia; for the completion, with tower, nave, and north aisle (July 25, 1908*) of St. Mary's Church, Stockton-on-Tees, begun by A. W. Pugin in 1841 and continued by G. Goldie in 1875; sale shops and artisans' dwellings, Infirmary-road, and Lock-street, for the Sheffield City Council, and St. Mary's new parish church, Wombwell, Yorks—chancel, organ-chamber, and vestries; he designed St. Marie's Roman Catholic Church, Sheffield, and also the altarinos or shrines of the Blessed Virgin and the Sacred Heart (November 6, 1886*), and the memorial to his father; and, in Sheffield, the large business premises adjoining the London City and Midland Bank, and the Drill Hall, and the following, as illustrated in our issue of October 9, 1897, No. X. of our series, "The Architecture of our Large Provincial Towns," namely, premises in High-street; Corn Exchange (with M. E. Hadfield); Cairns Chambers, Church-street, modern Gothic mode; cemetery gateway, etc.; and Nurses' Home, laundry, and other buildings for the Royal Public Hospital and Dispensary; also in Sheffield the Gas Company's offices; new premises for Messrs. Pawson & Brailsford; the new King's Head Hotel; Church Gates Buildings; and many Roman Catholic schools, including those of St. Wilfrid, Heeley, and St. Edmund, Sheaf-gardens; the Royal Hospital; Manor Public Elementary Schools; factory at the Moor for Messrs. J. Pickering & Sons, Ltd.; laying out of the new Intake Cemetery, with Roman Catholic mortuary chapel; Crematorium, City-road Cemetery, for the Corporation (July 30, 1904*), the two chapels and the entrance gates and offices being by M. E. & C. Hadfield, and the Roman Catholic Clergy House and Rectory, Norfolk-street. He was the architect of the churches at Handsworth and Wath; of many school-chapels and other buildings at Derwent and elsewhere in Derbyshire, to harmonise with the local work of the sixteenth and seventeenth centuries; Great Northern Hotel, Leeds (before the fire), and for the rebuilding of Thornbridge Hall, Bakewell. Messrs. C. & C. M. Hadfield w
second premium in the Sheffield (Pri
meadows) Public Baths competition
Hadfield was the architect, jointly wi
Garland, for the reconstruction (1898)
nave, aisles, and tower and spire of Wor
parish church, for which he complet
scheme (as mentioned above) six years
wards. He was the author of papers r
the Sheffield, York, and Manchester S
of Architects upon "The Architecture
Fifteenth-century and Early Tudor P
"English Architecture of the Fi
Century," and "True Building"; and
upon "Lead Work," read to the Sheffi
Crafts Guild. Mr. Hadfield married, in
Miss Rimondi, of Halifax, and leaves tw
and three daughters.

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THE LONDON COUNT COUNCIL.

The fortnightly meeting of the L
County Council was held on Tuesday
County Hall, Spring-gardens, S.W., Mr.
Buxton, Chairman, presiding.

Tenders.—Tenders were received fo
construction of foundations for an add
turbo-generator at Greenwich gen
station.

Statistical Returns.—The Local Gover
Records, and Museum Committee recomm
that the operation of the regulation
requires that a volume of "London Statist
"Statistical Abstract for London," and a v
of "Comparative Municipal Statistics
be prepared and issued annually be susp
for the year 1916-17. Also that the ope
of the resolution in regard to the susp
during 1916-17, of the printing of stat
returns be suspended so as to enable the
mentioned returns to be printed and issu
(1) "County of London Valuation," a
"Rates Made."

London County Council (Money) Bill, 1
The Parliamentary Committee have pr
the London County Council (Money)
1916, to provide the borrowing powers
Council for the financial year ending Mar
1917, and for the following six mont
September 30, 1917.

South-Eastern and London, Chatham
Dover Railways Bill.—In a report sub
by the Parliamentary Committee it was
that the Port of London Authority wi
for the insertion of a clause in the South-E
and London, Chatham, and Dover Ra
Bill requiring plans of the proposed alte
of the Charing Cross Railway Bridge to b
mitted to them for approval. The Comm
therefore, recommended that the Counci
no action in the matter.

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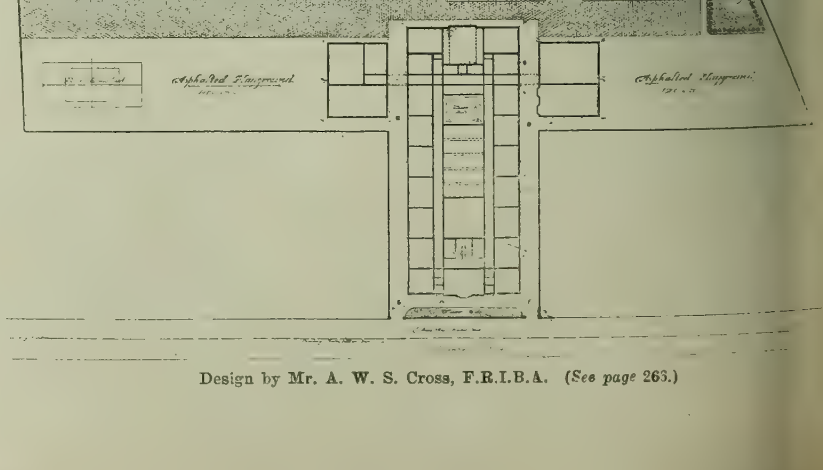
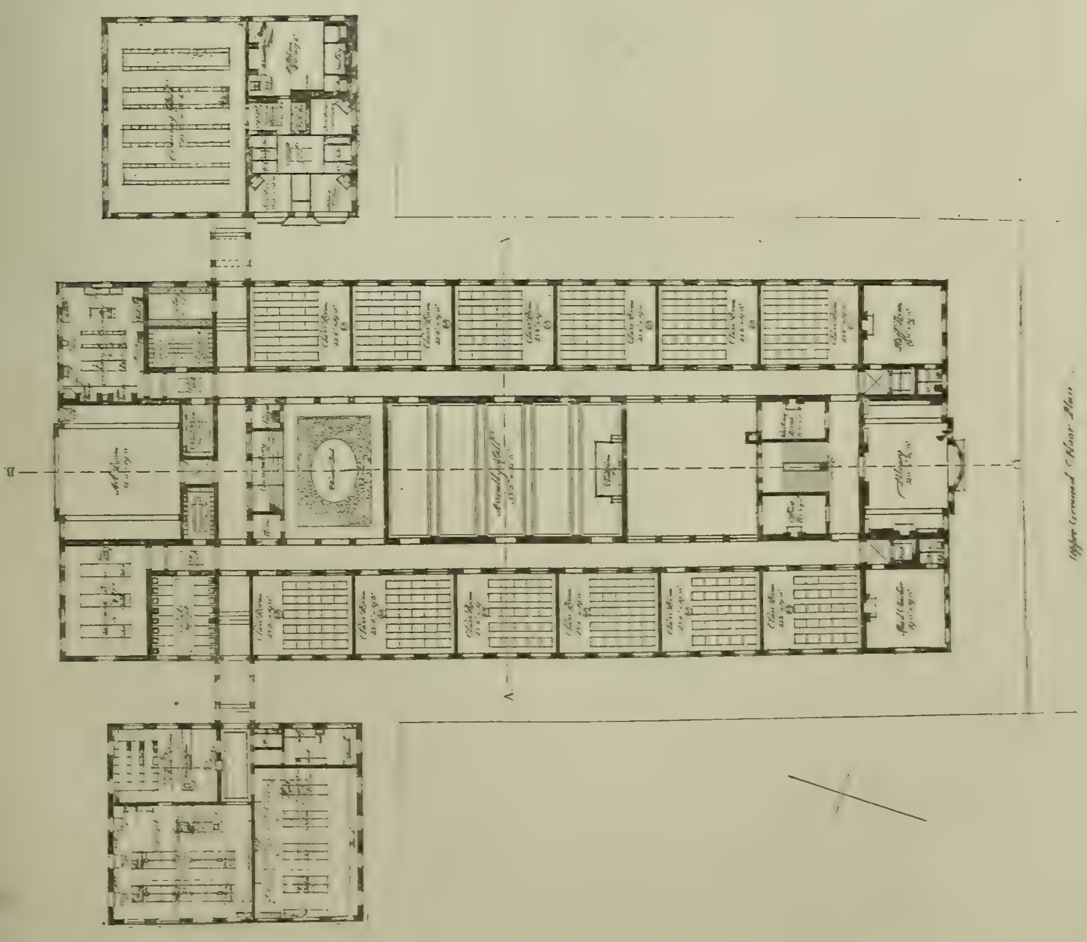
* Illustrated in the *Builder*.

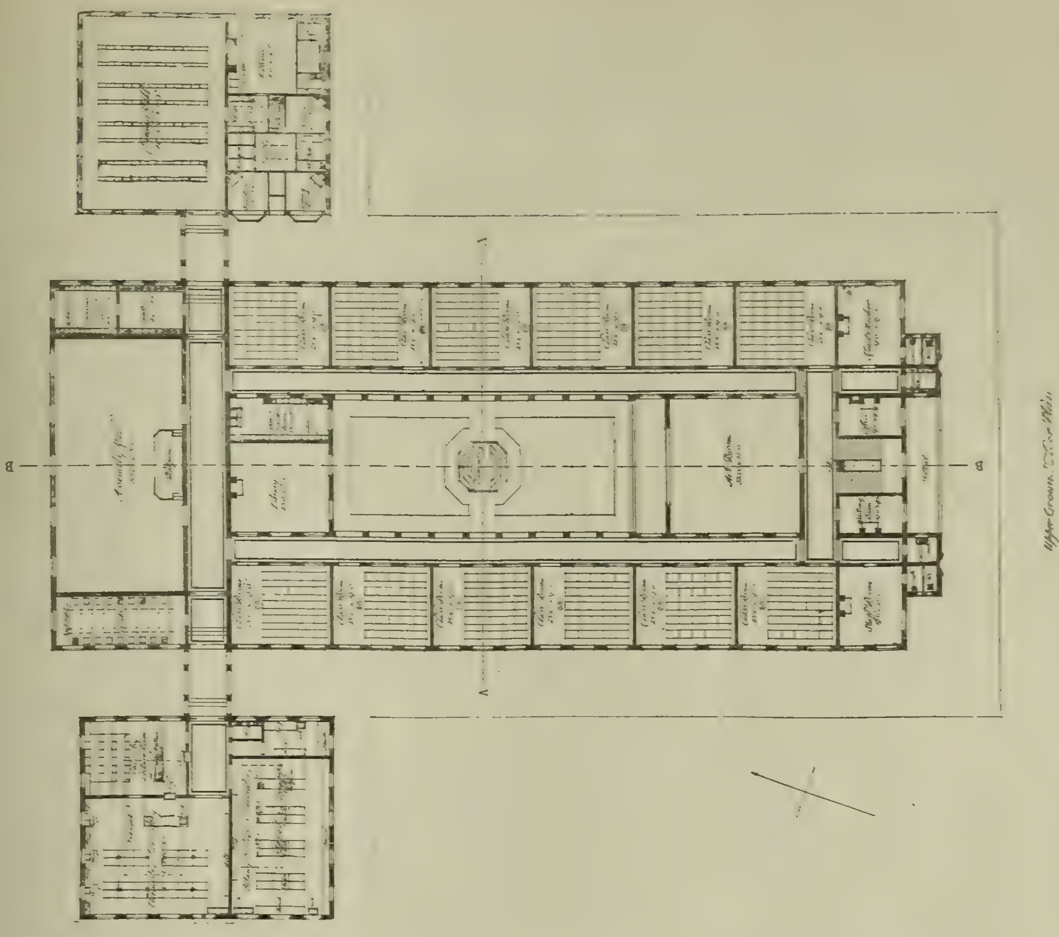


Design by Mr. A. W. S. Cross, F.R.I.B.A. (*See page* 263.)

LUTON SCHOOL FOR GIRLS. (A)



LUTON SCHOOL FOR GIRLS (B)



Designs by Mr. A. W. S. Cross, F.R.I.B.A. (See page 263.)

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ILLUSTRATIONS.

The New Technical Institute, Cardiff.

THIS building was opened on the 13th ult., the Right Hon. the Lord Mayor of Cardiff, Dr. R. J. Smith, performing the ceremony. On the previous Saturday the South Wales Institute of Architects were conducted over the building by the architects, Messrs. Ivor Jones & Percy Thomas.

Owing to the European War the completion of the building has been greatly delayed, and owing to the same cause the furnishing has had to be postponed, temporary rough furniture being used for the rooms required for immediate occupation, while the Chemistry Department, engineering workshop, and laboratory, bakery and electric engineering laboratory, etc., will not be used for the same reason.

The building faces the King Edward VII. Avenue, in Cathays Park, Cardiff, adjoining the Glamorgan County Hall, and opposite the University College of South Wales and Monmouthshire. The building roughly forms three sides of a square, the fourth side forming the future extension, which will add about one-fifth to the floor area of the present building. It is faced on the three principal sides with Portland stone from the quarries of F. J. Barnes, of Portland.

The whole of the bricks were obtained locally from the Phœnix Brick Works.

The floors throughout are of 6-in. concrete between rolled-steel joists, these and the steel roof principals, etc., having been supplied by Messrs. A. D. Dawnay & Sons, Ltd., of London and Cardiff.

The main roofs are covered with Dolemaen silver-grey random slates, and the other roofs are covered with Portmadoc blue slates, both being supplied by Messrs. Sessions & Sons, Ltd., of Cardiff.

The halls, corridors, lavatories, etc., are finished with terrazzo flooring, supplied and laid by the Marble Mosaic Company, of Bristol.

The floors of the rooms are finished with pitch-pine wood blocks, supplied and laid by Mr. J. F. Ebner, of London.

The heating and ventilating of the building has been designed on most up-to-date principles. The heating consists of hot water apparatus worked from central boilers with accelerated circulation. This system provides a particularly uniform temperature throughout the building, and also economises the consumption of fuel. Provision is made for working in sections, and also for shutting off any portion not required.

For the ventilation of the building fresh-air inlets are provided in connection with the radiators, each inlet being under control. The vitiated air is extracted through various openings into sub-ceilings and ducts communicating to two large exhaust fans. A separate fan is also provided for the ventilation of the central hall and a further ventilating fan for the lavatories.

In the Chemical Department, in addition to the ordinary ventilation of the laboratories, a special fan is provided for extracting the fumes from the fume closets, this being kept quite distinct from the general ventilation of the building.

This system has been designed and carried out by Messrs. G. N. Haden & Sons, engineers, Trowbridge.

The sanitary goods throughout have been supplied by Messrs. Shanks & Co., Ltd., Bond-street, London.

Amongst other sub-contractors may be mentioned the following :—

Messrs. George Wragge, Ltd., of Manchester—Steel casement windows throughout, leaded lights, wrought-iron balustrading to main and secondary staircases, bicycle entrance, etc.

Messrs. Smith, Major, & Stevens, of Northampton—Goods hoist.

Messrs. Henry Hope & Sons, Ltd., Birmingham—Patent roof glazing.

The British Luxfer Prism Syndicate, Ltd.—Pavement lights.

Messrs. Ewart & Sons, Ltd.—Lightning conductors and copper flagstaff.

North of England School Furnishing Company, of Darlington—Folding partitions.

Messrs. H. W. Cashmore & Co.—Lead rain water-heads.

The Cardiff Gas Company—Hot water heater.

Mr. James Gibbons, of Wolverhampton—Door and window furniture, etc., throughout.

Messrs. Alfred Brown & Co., of Birmingham—Gearing to lantern lights.

The De Lank Quarries, Ltd., Cornwall—Granite curbing around building.

Messrs. John P. White & Sons, Ltd., Bedford—Oak fencing and gates.

Messrs. John Williams & Sons, Ltd., of Cardiff—Various castings, storage tanks, etc.

Messrs. D. Morgan & Sons, of Cardiff—Fireplaces, sinks, etc.

The electric light installation was carried out by Messrs. H. J. Cash & Co., of Westminster, under the supervision of the City of Cardiff Electric Light Department.

The main staircase is constructed of reinforced concrete on the Hennebique system, and was carried out by the general contractors. The stone carving to main entrance, etc., was carried out by Mr. Albert H. Hodge, of London, and the fibrous plaster work to the assembly hall by Mr. T. A. Jones, of Cardiff.

The general contractors for the building were Messrs. E. Turner & Sons, Ltd., of Cardiff, who have been contractors for the majority of the buildings in Cathays Park, and the architects were Messrs. Ivor Jones & Percy Thomas, also of Cardiff, who won the competition for the building in 1911.

The clerk of works was Mr. W. R. Irwin, of Malefant-street, Cardiff.

Wren's Churches.

WE give an illustration of St. Andrew, Holborn, reproduced from "The Churches of Sir Christopher Wren," by Mr. J. Clayton, published by Messrs. Longmans, Green, Brown, & Longmans, which we give by the courtesy of Messrs. Longmans, Green, & Co. We also give a reproduction of a sketch of the tower of St. Alban, Wood-street, by Mr. Harrold Norton. Further notes on these churches will be found on page 261.

Design for New Secondary School for Girls at Luton.

IN order to reserve the largest area possible for the playing-fields and playgrounds advantage was taken of the fall of the ground from north to south of the site, some 15 ft., to plan a lower ground-floor story towards the Marlborough-road boundary, containing the school entrance lobby and staircase approach to the upper ground floor, the bicycle-room, the boiler house, and coal store, the large cloak-room, and the covered playground. With these exceptions the whole of the school accommodation is arranged in a group of one-storied structures, the floors of which are slightly above the level of the ground at its highest point. It was found that under the general scheme of plan thus evolved the assembly hall could be placed either at the extreme northern boundary of the school buildings, as in scheme A, or, as in sche in a central position between the twelve ventilated classrooms that face east and and are approached by open arcaded cor Connected by open lobbies and placed ea west of the main structure are two sub blocks of buildings, that on the east cont the school dining-room, kitchen, service and caretaker's quarters, and that on th the chemistry laboratory and lecture-roo the laboratory for physics and botany.

Provision is made in the playing-fiel a full-size hockey-ground and for four and one hard tennis courts in addition asphalted playgrounds, each about 150 75 ft. The requirements of the Bo Education and the conditions of the c tition were rigidly fulfilled.

A. W. S. Cr

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MEETINGS.

MONDAY, APRIL 10.

Surveyors' Institution.—Mr. W. R. D on "The Principles of Town Planning."

Royal Society of Arts.—Mr. Edwa Reeves, F.R.A.S., on "Surveying." (L III.) 4.30 p.m.

Incorporated Clerks of Works' Asso (at Carpenters' Hall, London-wall, E Annual meeting. 6.45 p.m.

TUESDAY, APRIL 11.

Architects' Benevolent Society (at Conduit-street, W.).—Annual general m 5 p.m.

Royal Society of Arts.—Sir Daniel K.C.M.G., M.A., D.C.L., F.L.S., on Forest Resources of Newfoundland." 4.3

WEDNESDAY, APRIL 12.

Edinburgh Architectural Association.— general meeting. 8 p.m.

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FIFTY YEARS AGO.

Hotel Furniture.

"ONE WHO LIVES AT HOTELS" write some reason:—I think you would be d service by pointing out the grievar some of our new hotels, of the objecti character of the bedroom furniture, of them having thick stuff woollen fur and hangings for their beds, the sm which is very offensive and, in a sl apartment, I think, positively unwhol Staying some time since at one of the westerly of the new hotels, I had friends, and showing them over the they said they could not live in it or account.

It is the more to be regretted, as to persons, I believe, the bed would be sidered preferable entirely without furn or, if necessary at all, that it should be simple, washable, and inexpensive.

[*** From the *Builder* of A 1866.—ED.]

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NO. 18, TUFTON-STREET, WESTMINSTE

The premises, No. 18, Tufton-street, minster, until lately occupied by the tectural Association, have been acquired National Library for the Blind, and alter are being carried out for the Governo Messrs. Turnbull & Son, of Northumbe alley, Fenchurch-street, E.C., under the intendence of Mr. Eric Hodder, architec

ARCHITECTS' AND BUILDERS' SUPPLIE

The managing director of a firm of arch and builders' specialists, who is shortly ceeding to Australia, desires to hear fro or two high-class United Kingdom manufac desirous of opening up business in the Con wealth. Communications in this conn should be addressed to the Secretary, Ch of Commerce, Liverpool.

LEGAL SECTION.

ES ON CURRENT CASES.

orth *v.* Battersea Borough Council: Misfeasance or Nonfeasance.

IS action, which has passed through more than the usual vicissitudes of a case before the courts of law, reached rt of Appeal for the second time in er last, and its decision has recently blished in the legal reports.

laintiff, a lady, when riding her bicycle Lombard-road, within the borough of ea, in order to escape collision with a , passed over the grating of a gully as connected with the public sewer in e roadway. In doing so the plaintiff own from her bicycle, and, the wheels carriage going over her, she sustained njuries, for which she sought to recover s from the defendants. It was alleged e defendants were liable in damages accident, both as highway authority sanitary authority, owing to their ce in allowing the gully and grating to w the level of the road surface, in not the grating in proper repair, and in ing it to be in a dangerous condition.

defendants disclaimed liability (*a*) as way authority, on the ground that the of their predecessors—the Wandsworth Board of Works—had never been red to them; and (*b*) as sewer authority, they had been guilty of nothing more nfeasance.

action was first tried by Mr. Justice e with a common jury in December, 8 J. P. 173), when the jury found that the plaintiff's accident was caused ding over the gully; (*b*) by the negligence the road authority and the sewer y in allowing the gully to be below ining road surface; (*c*) by the negligent tion of the gully itself by both the road sewer authorities; (*d*) by the negligence defendants both as road and as sewer y in not remedying the defect of the ing below the roadway; (*e*) by the frame ully grating being broken, and, further, und that the defendants both as road ewer authority were guilty of negligence epairing it.

ury assessed the plaintiff's damages at Upon these findings of fact by the e learned judge held that the original e construction of the gully was done by andsworth District Board of Works, re the defendants' predecessors in title o were constituted both the road and er authority for the road where the happened by the Metropolis Manage- ct, 1855; and he further held that the orth District Board remained liable matters which occurred during their tration, and that their successors were ble only for the exercise of the powers red to them by the amendment to the lis Management Act of 1888 and by of the London Government Act, 1899, t by these Acts the liability for the defective construction of the gully er transferred to the defendants. In sition as sewer authority the learned eld that the defendants were liable gence in not seeing that the inequality urface levels, owing to their gully being below the roadway, was remedied, and gence in not repairing the broken gully. position as road authority he was of that the defendants were not liable or the gully being below the level of lway or for not repairing the broken Judgment was accordingly entered for ntiff for £1,961 with costs.

defendants appealed on the ground ere was no evidence before the jury e status of the defendants under which trolled the gully and that no question to the jury as to whether the defendants had the means of knowing, or ought to have known, of the defect in the gully. The defendants also alleged that no directions were given by the learned judge to the jury to address their minds to this question in answering the question as to negligence.

The appeal was heard in November, 1914 (79 J. P. 105), and a re-trial of the action was ordered upon the grounds that the jury ought to determine whether the gully was a thing for which the road authority were responsible to the exclusion of the sewer authority, or for which the sewer authority were responsible to the exclusion of the road authority, or for which they were both responsible, for the reason that if the gully was vested in them as road authority the defendants would not be liable for mere nonfeasance, and upon the further ground that, if it should be found that the defendants were responsible for the gully as sewer authority, it ought to be determined—in order to ascertain whether there was actionable negligence—whether the defect was known, or with reasonable diligence would have been known to the defendants.

Lord Justice Buckley (as he then was), in his judgment, said the jury had found that the accident to the plaintiff arose through her riding her bicycle over the grating, but the defendants contested the view that the condition of the grating or its position relative to the surface of the roadway caused her fall. As to the question whether the defendants were liable as a road authority or as a sewer authority it should be borne in mind that the sewer was laid in 1865, but the road itself was not made until 1883. The first thing to be determined, therefore, was whether the gully and grating were controlled by the defendants as road authority or as sewer authority, or by them in both capacities. If the grating belonged to the defendants as road authority then, following the decision in the case of Cowley *v.* Newmarket Local Board ([1892] A. C. 345), if this were mere nonfeasance—that is, if they did not replace the broken frame if it was broken, or if they did not raise the sunken grating if it was sunken, and so on—they would not be liable. Upon the other alternative, supposing that the defendants are rendered liable as the sewer authority, it must first be ascertained whether they have been negligent as such sewer authority, and they will not have been negligent unless they knew, or had the means of knowledge, or ought to have known of the defects in question.

To the question, "Was the accident to the plaintiff occasioned by the negligence of the defendants in not remedying any defect in the gully owing to its being below the roadway (*a*) as sewer authority or (*b*) as highway authority? the jury answered "Both," without discriminating between the responsibility of the defendants in one or other character. That is, the jury said that in as far as the accident was due to the gully grating being below the roadway the defendants were negligent in both capacities. As to the broken condition of the grating, the jury only found that it contributed to the accident, but they did not say that it would have happened apart from the grating being broken. In these circumstances he was quite unable to understand whether the jury meant that the accident was caused by the dishing of the gully, or the sinking of the gully, or the broken frame, or some or which of them. There was also a question of mixed law and fact upon which the differing responsibilities of the defendants as road authority or as sewer authority rested, viz., was this grating a thing for which the road authority was responsible to the exclusion of the sewer authority, or were the sewer authority responsible for it to the exclusion of the road authority, or were they both responsible for it? The fact was that when the road was made in 1883 the granite setts with which it was paved and the gully in question were both put in, and the expense of so doing was apportioned over the frontagers under the powers given by Act of Parliament; but upon this the question was whether the road authorities bought and put the gully in, and, when it was put in, who had control over it. He thought that *primâ facie* the grating formed part of the surface of the road; it was put there to support the carriage or foot passenger who is passing, and it was pierced for the purpose of allowing water to pass through it into the sewer; but it was a question which should have been left to the jury to find as fact whether the grating formed part of the sewer or part of the road. Supposing it was as sewer authority that the defendants were responsible, then the negligence alleged must be proved against them, and negligence depends upon knowledge or means of knowledge. If there is neither one nor the other, even although you owe a duty, it may not be negligent not to perform it, and upon the assertion that the grating was defective and a portion of it actually wanting the question of knowledge was material.

As a result of the decision of the Court of Appeal the case was re-tried in February, 1915 (79 J. P. 309), by Mr. Justice Scrutton, with a special jury, and this jury found (1) that at the time of the accident a piece of the frame of the grating was missing; (2) that the grating itself was not dangerous to a careful cyclist; (3) that the danger was due to the original placing of the grating in an excessive depression and not to any subsequent alteration of position; (4) that the plaintiff's injuries were not caused specifically either by the broken frame or by the dangerous condition of the grating; (5) that the plaintiff could not have avoided her fall or injury by the exercise of reasonable care and skill, considering the presence and position of the carriage and the state of and depression in the road; (6) that the grating was part of the road, that it was placed in the road by the Board of Works for the Wandsworth district, that it was paid for by the frontagers, but was controlled by the road authority; (7) that at the time of the accident neither the road authority nor the sewer authority nor their servants knew or could have known of the defect in the grating by the exercise of reasonable care. In answer to a supplemental question the jury found that the accident was caused by the broken frame and grating being in an excessive depression.

Mr. Justice Scrutton said he understood the findings of the jury to be that there was no settlement of the gully after its original construction, that the frame of the grating was broken and part of it missing, but that the broken part was so full of detritus that it was not negligent not to have discovered that it was broken. They accordingly found that the accident was caused by the original construction of the channelling, gully, and grating, the grating being so much below the level of the surrounding road that it was a danger; but they also found that, although it was a danger, it was not negligence not to have seen that it was a danger, although the learned judge concluded that they thought it was a danger. The persons who carried out the original construction of the gully and grating in the roadway were the Wandsworth Board of Works, who are two removes from the present defendants. The present defendants are the successors of the Vestry of the parish of St. Mary, Battersea, and the Local Government Act of 1899 transferred to the defendants not only the property but the liabilities of the Vestry, but in the Act which turned the Wandsworth Board of Works into the Vestry of St. Mary, Battersea, there are no express words transferring liabilities to the Vestry. Mr. Justice Horridge had decided that the liabilities of the Wandsworth Board were not transferred to the defendants on the general principle that when you retrospectively want to transfer liabilities you must do so by clear words, and he, Mr. Justice Scrutton, did not propose to interfere with that decision. It therefore follows that a previous road authority having put down a dangerous grating—dangerous, that is, by reason of the difference of level between it and the road—their successors in duty have done nothing to alter it. Doing nothing on the part of a road authority is, however, not actionable, and there is not even a finding that this doing nothing was negligent, because there is an express finding that the defendants neither knew nor by reasonable means could know of the defect, if any. Consequently, assuming that the plaintiff's injuries can be ascribed to the road authority, the plaintiff must fail, because she has not established any misfeasance on the part of the defendants as a road authority. He thought there was an obligation upon a road authority to use reasonable care in the construction of roads, but they were not called upon to warrant the safety of the road, and if a defect not discoverable by reasonable care caused an accident they would not be liable. If, therefore, it was not negligent not to have foreseen the danger resulting from the difference in level, it was questionable whether even the Wandsworth District Board would have been liable for their original construction. He held that the jury had not found that the defendants were negligent as a sewer authority, because although they found that there was a default it was not such a default as reasonable care could have avoided. A road, he said, that has a hole in it would be a dangerous road, and in his view a grating put over a hole through which surface water is removed from a road becomes part of the road, and it is there to afford safe transit along the road. He considered it an extremely unsatisfactory state of things that there should be this difference between liability as road authority and liability as sewer authority, but the remedy is for Parliament to step in and put the road authority in the same position as the sewer authority. He therefore gave judgment for the defendants with costs, including the costs of the first trial.

From this decision the plaintiff appealed, and the matter came before the Court of Appeal for the second time on December 3 and 6, 1915, and is reported in [1916] 1 K. B., p. 583. For the plaintiff it was then argued that the original placing of the frame and grating in the dangerous condition they were was an act of misfeasance for which the Wandsworth District Board would have been liable if any accident had occurred, and it could not be contended that the liabilities of the Wandsworth Board did not pass to their successors and to the defendants.—Lord Justice Pickford said the case had been made somewhat difficult owing to some confusion in the findings of the jury, but he thought the effect of them was that the accident was caused by the undue depression of the grating below the surface of the road causing a steep decline, that that depression was a part of the original construction, and that the defendants were not negligent in not having discovered that that extreme depression was dangerous. It was said that the jury impliedly found negligence on the part of the Wandsworth District Board in constructing the gully in the way they did, but in his opinion if negligence is to be relied upon as the foundation of an action it must be expressly found. The evidence was that this method of construction both of the grating and frame and of the adjoining parts of the road was the universal method of construction at the time according to the state of skilled knowledge then existing, and he thought there were probably thousands of similar gullies still remaining in the London district. It is quite possible, he said, to have a thing which experience shows to be a danger and yet there may not have been any negligence in first constructing it. The position, therefore, is that the Wandsworth District Board, exercising proper and reasonable care and skill, constructed, about thirty years before this accident happened, a grating in a manner which was not negligent, but which the jury found in the circumstances of this case to be dangerous. The Wandsworth Board had carried out their statutory powers in a reasonably careful and skilful manner, and he did not think that there was an absolute duty imposed upon them of making the road safe. If a local authority do something which afterwards turns out to be dangerous, but in doing it they exercise reasonable care and skill, in his opinion they are not responsible. If the state of things had been such that as time went on it became clear that the grating so placed was dangerous, and if the local authority who laid it or their successors allowed it to remain so, they might be responsible, because it might be said that they were negligent in not having altered it; but, as he took the view that the Wandsworth District Board would not have been liable, it was not necessary to inquire whether any liability was transferred to the defendants. Lord Justice Bankes concurred, and Mr. Justice Neville said that even though the grating was so constructed in 1883 that many years afterwards it proved to be a danger to cyclists, that would not be such a misfeasance as would make the road authority liable unless they had failed to take reasonable care in the original construction.

The appeal was accordingly dismissed, and the judgment of Mr. Justice Scrutton for the defendants in the second trial was affirmed.

From the point of view of the general public it is very unsatisfactory to find that because a part of a road is controlled by a road authority no compensation can be obtained for an accident due to their not bringing their constructions up to date and that they are only liable when they actually do something in a careless or unskilful manner perhaps thirty years before an accident occurs, whereas when the same authority acts as a sewer authority they may be liable if they allow their works to remain in an antiquated and dangerous condition. There is little hope that the observations of Mr. Justice Scrutton as to the present unsatisfactory state of the law on the matter will receive the attention of Parliament during the continuance of the war, but it is a matter which will require serious attention at the earliest available opportunity.

LAW REPORTS.

KING'S BENCH DIVISION.

(Before Mr. Justice DARLING and a special jury.)

Corporation Sued for Negligence: The Public Trustee v. Torquay Corporation.

THIS was an action tried at the recent Devon Assizes by Mr. Justice Darling with a special jury, in which the Public Trustee, in whom were vested eight houses at St. Michael's-terrace, Torquay, claimed damages against the Corporation of Torquay for alleged negligence, whereby a wall belonging to the plaintiff fell and damaged his property. The damages were agreed at £350, subject to liability being found.

Mr. Clavell Salter, K.C., M.P., and Mr. J. G. Pease appeared for the plaintiff; and Mr. J. A. Hawke, K.C., and Mr. Harry Geen for the defendants.

Mr. Clavell Salter said the houses in question were built in the year 1878, and at the rear was a passage giving access to the back entrances. The site being upon a hillside, the ground had been terraced, and a facing wall of about 20 ft. in height was built against the embankment at the back of the passage. The houses drained into a sewer laid in the passage, and in the year 1914 questions arose as to the state of the drainage, but after some correspondence it was agreed that the owner of the houses was responsible for the drains as far as the sewer, but that the Corporation were responsible for the line of sewer itself. After investigation the Corporation decided to relay the sewer, and the work was carried out in September, 1914. The old pipes were taken out and new pipes were laid in the same line of trench. The plaintiff alleged that the work was negligently done, as in February, 1915, the greater part of the facing wall came down with a crash and did a great deal of damage and destruction. The case for the plaintiff was that the trench was cut too close to the facing wall, that it was improperly timbered, and that the trench had been opened out in one length instead of in sections.

Mr. C. S. Appleton, architect, Torquay, gave the results of his inspection immediately after the wall had fallen. He came to the conclusion that the collapse was not due to a landslide, but that it was caused by interference with the foundations of the wall in digging the trench and in not timbering it. The reason he assigned for the wall not falling for five months after the completion of the work was that the ground was able to support the weight of the wall until the wet weather came, which loosened the ground and allowed
the foundations to slide. He did not
the mortar produced by the defendants
good quality, and he admitted that t
was not provided with drainage holes

Mr. D. Edwards, engineer, Taunto
he considered the masonry of the
good quality. Mr. H. Goss, quant
veyor, and Mr. Penwell, builder, al
evidence for the plaintiff.

Mr. Hawke, for the defendants,
wall had fallen owing to its age,
abnormal rainfall for the previous two
for which no relief was provided in
struction of the wall.

The workmen who relaid the sewe
that they excavated enough for a day
and then relaid the pipes and ramme
trench every day. It was untrue to s
the whole length of trench was taken
one time. They considered timberi
necessary, as the trench was cut throug
and hard rock, and the sides stood up
any support.

Mr. George Sleeman, clerk of work
the sewer was relaid under his supe
and he did not consider timbering ne
The trench had not been timbered w
sewer was first laid. The work was c
done, and the trench filling was well r

Mr. Gillard, Deputy Borough Survey
the wall did not slide, but it toppl
owing to the pressure of earth behin
it became waterlogged after the e
rains. There were no footings a
drainage holes, and the wall had no
but was vertical and about 2 ft. thick.

Capt. Garnett, A.M.Inst.C.E.,
Surveyor, said the digging of the tre
no effect upon the foundations of th
For part of its length the wall faced
cutting, but for some distance it acte
retaining wall against filling, and f
purpose it was badly designed and un
stand the strain any longer, and, this
giving way, it pulled the remainder
In some parts of the wall the mort
fairly good, but in other parts it w
poor, and in some cases the back of t
was filled in dry and without any mo
all. The lower courses of the wall h
shifted, and the fall was not caused by
of the foundations.

Mr. Ham, clerk of works at the new
and Mr. Ryder, clerk of works of t
theatre, gave corroborative evidence.

Mr. J. Moulding, M.Inst.C.E., Ci
gineer, Exeter, was of opinion that the
of the trench had nothing to do w
fall of the wall, but that the wall b
faulty design, it could not any longe
stand the pressure behind it.

Mr. Norman Bridgman, A.R.I.B.A
the mortar was very poor, and the w
weak in construction. The foundatio
not moved from their original line.

His Lordship, in summing up, poin
that the trench never had been ti
although it had been laid and rela
considered it no more negligent not to
the trench when the sewer was relaid
was not to have done so when the sew
first laid. The evidence was uncontr
that the trench was cut in short sectio
the same material that was taken o
replaced and was rammed in again as
clusion to each day's work. The defe
witnesses had adduced the theory th
wall fell because it was unable to sta
thrust in the portion which acted as a
ing wall as distinct from the portion
acted merely as a facing wall, and it
the jury to say whether the plaint
satisfied them that the defendants
guilty of any negligence in carrying ou
work so as to endanger the safety
plaintiff's wall.

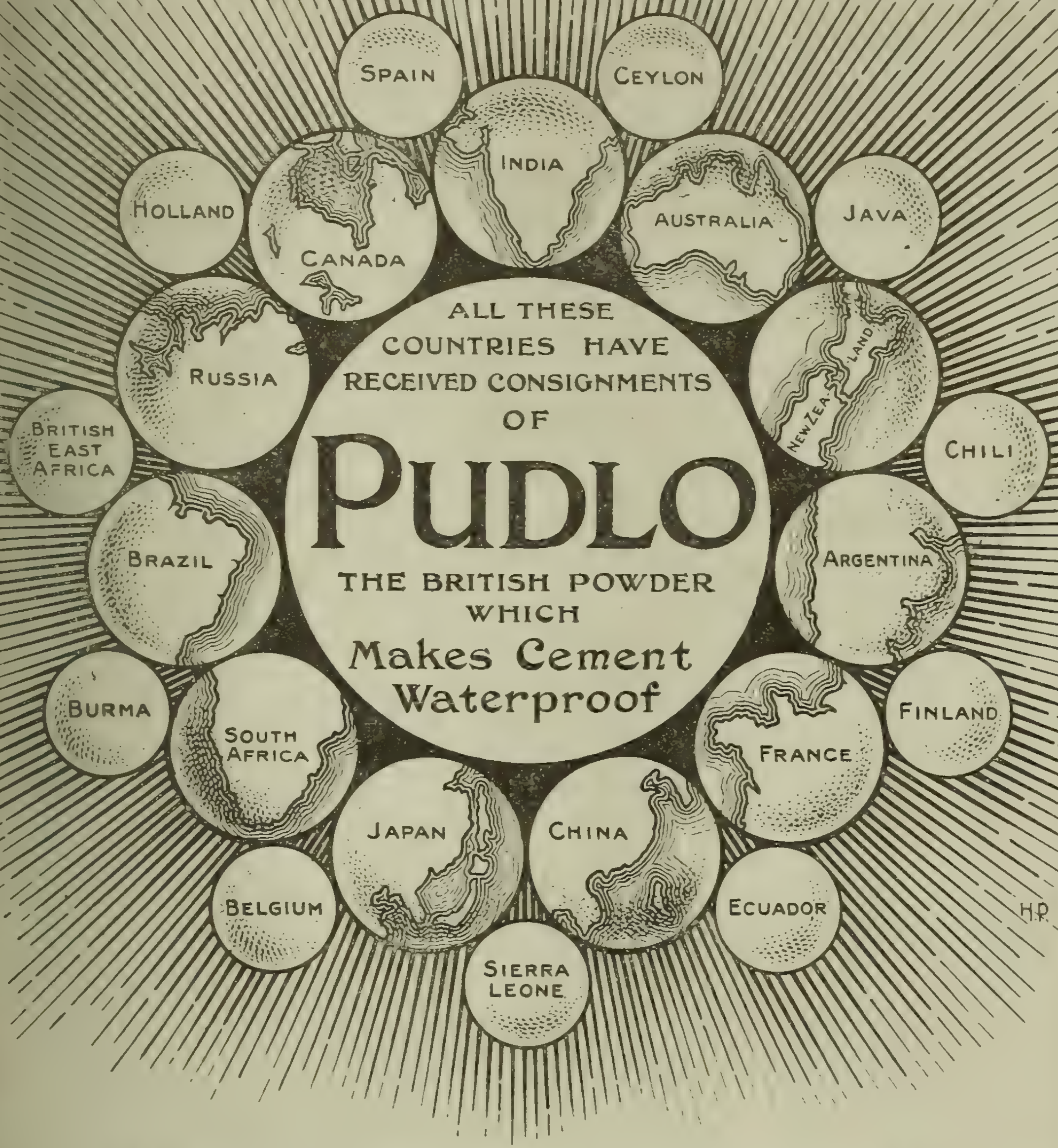
The jury found that the defendants
been negligent, and judgment was acco
entered for the defendants, with costs

COURT OF APPEAL.

(Before the LORD CHIEF JUSTICE, Lord
WARRINGTON, and Mr. Justice SCRUT

The Reconstruction of a Theatre; Ac Structural Engineers: George Lands & Son, Ltd. v. Man Palace of Varieties, Ltd.

THIS case was heard on the 27th ul
the appeal of the defendants from a ju
of Mr. Justice Rowlatt in the action wh
brought against them by Messrs. Geo.
& Son, Ltd., structural engineers, of
Nottingham, arising out of a contract
internal reconstruction of the Ma
Palace Theatre.



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Mr. Cyril Atkinson, K.C., for the appellants, said Mr. Justice Rowlatt awarded plaintiffs in the action £514. Plaintiffs claimed for the balance of money alleged to be due on a contract under which they undertook the delivery and erection of steelwork necessary for the internal reconstruction of the theatre, the entire inside of which was being taken out and a new interior fitted. The only point raised by the appeal was with regard to £350, representing an allowance provided in the contract of £50 a week for each week by which plaintiffs anticipated the contract time. Plaintiffs claim to have anticipated the contract time by seven weeks. The claim was based first on a certificate, but that failed. Alternatively the plaintiffs claimed that the money was due under the contract. No evidence was given that the contract had been anticipated by seven weeks, but it was alleged that defendants' architect agreed that the contract time should be extended in such a way that plaintiffs gained seven weeks. Defendants denied the alleged agreement or that the architect had any authority to make it.

Mr. Parfitt, K.C., for the respondents, said that no such point as that there was no agreement was raised at the trial. If the point had been raised as a point of law it was unthinkable that the Judge would not have dealt with it. He relied upon the arrangement which eventuated in an extension of the contract time.

The Lord Chief Justice, in giving judgment, said the question was what was the agreement which was eventually arrived at, long after the contract had been made between the parties, as representing the date from which the plaintiffs' work was to commence? By the contract the materials were to be ready for despatch from the works not later than May 26, 1913, and by another clause the lifting of the steel structure was to commence on June 24. At some date in August, 1913, there was an agreement to vary it, and this seemed to be quite clear between the parties. The only question was what was that agreement. It was quite clear there had been delay, and the difficulties which arose resulted in the agreement, that agreement being that the time was to be extended so that the date of commencement should be August 20. The real dispute was what was the meaning of commencement of the work dated from August 20. Did it mean that the whole of the work from May 26 was to commence from August 20, or only that the lifting of the auditorium steel was to commence on August 20? The learned Judge, in the Court below, found that the "commencement" referred to was the beginning of the work undertaken in pursuance of the contract. Therefore the whole of the work was to commence from August 20 in order to arrive at the time that was saved. If that was right, the appellants were wrong. He (the Lord Chief Justice) had come to the conclusion that there was evidence upon which the learned Judge was entitled to decide that the agreement, in fact, applied to the extension from May 26, and therefore there was no ground for disputing the decision in that Court. There was another point that the architect had no authority to make such an agreement. It was objected that this point was not at issue before the learned Judge at the trial. The real question in dispute before the Judge was what was the true agreement arrived at, and on that point his Lordship held that the appellants did not succeed. The judgment must stand, and the appeal dismissed.

Mr. Justice Warrington and Mr. Justice Scrutton concurred.

OFFICIAL REFEREE'S COURT.

(On March 13.)

(Before Mr. VEREY.)

Vinson v. Lord Molesworth.

IN this action Mr. Vinson claimed £600 odd from Viscount Molesworth for dilapidations under a repairing covenant of an agreement under which Lord Molesworth, in October, 1907, took a country house called Walters Hall at Monkton, near Margate. The agreement was made with the defendant's predecessor in title, Mr. Lewis, and was for three years certain with an annual occupation afterwards, subject to six months' notice in writing.

Under the covenant upon which the action was brought the tenant agreed that he would forthwith, upon the signing of the agreement, put the place in thorough repair. It was a very old house, dating back to the eighteenth century, added to in 1852, and, on account of its condition and the repairing clause, was let at the reduced rental of £60 a year. When the tenancy was about to expire a notice was served in March, 1914, and Lady Molesworth was written to by the plaintiff's solicitor—Lord Molesworth being away in India at the time—pointing out that the premises were in a dilapidated state and likely to become worse, as they had been left without occupation. After some correspondence, Mr. Jennings, a surveyor, went over the premises and made a schedule of the repairs which he believed to be necessary.

Mr. Joseph Jennings, a surveyor, of Canterbury, was called, and said that, after studying the terms of the agreement, he made his survey, and found that a large sum of money would have to be spent upon the premises before they could be again occupied. He subsequently prepared a schedule of dilapidations, and had fixed the cost at pre-war prices, which amounted to £601 15s.

The witness was cross-examined at length upon the details of his requirements, and he admitted that some of the items were simply deductions from what he saw. For instance, he had put down the renewal of greenhouses which appeared to have existed against a wall, and he had claimed for the reinstatement of vines in a vinery, and of rose-trees, which appeared to have been removed. He said they were rose-trees because the removals had been from the rose-garden.

Lady Molesworth, giving evidence for the defence, said they spent between £200 and £300 upon repairs before they went into the house, and more while they were in occupation. She thought the £600 ought to be enough to buy the house right out. Lord Molesworth was at present on military duty, serving in the R.F.A. Reserve at Salisbury.

The Official Referee pointed out that the house was an old one, and said that the repairing covenant must be read having regard to the age of the house and the class of persons who would be likely to occupy it. It had been unoccupied for several years before Lord Molesworth took it, and had not been occupied since he (Lord Molesworth) left it.

In giving judgment the Official Referee said that the property consisted of a house, stables, and outbuildings, and a garden of about two acres. The house had been built about 200 years ago and additions had been made to it about sixty years ago. Mr. Lewis, who was the owner at the time the agreement was entered into, stated that it was then in a wretched state of repair, and had been unoccupied for a long time, that he would then have taken £1,500 for the freehold. Lord Molesworth took the house on a three years' tenancy at £60 per annum, a reduced rent in consideration of his having undertaken to put the premises in repair upon entering into possession. He remained in possession until 1914, and in the meantime, in November, 1913, the property had been sold to the plaintiff. The evidence of Mr. Lewis, who was owner up to that time, was that he visited the premises several times, and that the suggestion by the plaintiff that no money had been spent upon them was untrue, as he was more than pleased with the steps taken by the defendant to put them in order. When he last visited the premises in 1912 he thought that the tenant had thoroughly performed his contract to repair. Mr. Lewis was an independent witness and had an interest in seeing that the tenant performed his covenant, and it was clear that he kept an eye upon what was being done. Lady Molesworth said that she had spent £200 on the initial repairs, that the outside had been painted twice during the tenancy, and that upwards of £300 had been spent on the property. In comparing the evidence for the plaintiff with that for the defendant it was clear that the plaintiff's surveyor was mistaken when he said that no repairs had been done, and he (the Referee) thought that he had adopted a very high standard in his estimate and in his prices. The evidence satisfied him that the place was in a better condition at the termination of the tenancy than at the beginning, and he could not understand how £600 or any such sum could be required. But if a tenant committed a breach of covenant to repair the landlord was not compelled at once to do the repairs, and was entitled to judgment for damages. After careful consideration of the whole of the evidence, and on looking at all the facts, he found that some repairs were necessary, and that the defendant had failed to carry out the covenant, and, after making proper allowance for the rise in prices, he found that the plaintiff was entitled to recover as damages £150.

Judgment was accordingly entered for the plaintiff for £150, with costs.

NEW COMPANIES.

THE undermentioned particulars of companies recently registered are taken the Daily Register compiled by Messrs. J & Sons, Ltd., Company Registration A Chancery-lane, W.C. :—

R. BARTON, ADAMSON, & CO., LTD. (14 Sandringham Works, Enfield-highway, E Registered March 8. To carry on bu of makers and repairers of motors and cars, vans, lorries, fire engines, and carriages of every description, dealers accessories and outfits, oils, lubricants engineers, builders, contractors, steel fou etc. Nominal capital, £2,000 in 2,000 £1

MATTHEWS & CO. (MARGATE), LTD. (14 133, High-street, Margate. Reg March 9. To carry on business of d furnishing and general warehousemen, fu and fittings, engineers, contractors, gas land, house, and estate agents, builder Nominal capital, £2,000 in 2,000 £1 shar

BROWN HALLS, LTD. (143,266), 2, Half lane, Eccles, near Manchester. Reg March 11. To purchase or acquire a lea plot of land in Church-street and Corpo road, Eccles, with the electric picture thereon, to enlarge, reconstruct, etc. theatre, to build, etc., other theatres and carry on business of theatre pro and managers, etc. Nominal capital, in 2,000 £1 Ordinary shares.

BARWICK & PROSSER, LTD. (143,287). tered March 15. To carry on busin general carriers by land and water, and forwarding agents, etc., smelters, b contractors, engineers, tool makers, ste iron founders, gas makers, etc. N capital, £10,000 in 10,000 £1 shares.

T. BROOK & CROWTHER, LTD. (14 Registered March 15. To carry on b for the manufacture of machinery fo ing and preparation of gun cotton, and explosives, etc., mechanical engineers founders, tool makers, and brass fo builders, electrical water supply en etc. Nominal capital, £3,000 in 3,000 £1 s

BURT & SON, LTD. (143,297). Reg March 16. To carry on business in the Kingdom and elsewhere of exporter importers of coal, timber, iron, slate building materials of all kinds, carriers and water, dealers in bricks, tiles, terra-cotta, china and earthenware go every description, contractors, builders neers, etc. Nominal capital, £15,000 £10 Ordinary shares and 750 £10 Pre shares.

COOKE'S (FINSBURY), LTD. (143,298). tered March 16. To carry on busi manufacturers of and dealers in fu upholstery, etc., stoneware and metal earthenware, builders, glaziers, plumbe and electric light engineers, water and engineers, etc. Nominal capital, £15, 6,250 £1 Preference shares and 8,750 £1 O shares.

CYMOGRAPH, LTD. (143,323), Bu House, Cannon-street, E.C. Re March 18. To carry on business of me engineers, manufacturers of implemen other machinery and utensils, brass fo metal workers, builders, electrical en carriers, merchants. Nominal capital, in 1,000 £1 shares.

W. D. PEATTIE & CO., LTD. (1 Registered March 21. To carry on of builders, contractors, decorators, me dealers in sand, stone, lime, bricks, hardware, and other building requisites, house agents, valuers, surveyors, s electrical lighting, water and general en Nominal capital, £500 in 500 £1 shares

MARCHBANK, BAINBRIDGE, & CO. (M BROUGH), LTD. (143,368). Re March 23. To acquire, take over, an on business of coal merchants and owners carried on at Middlesbro Marchbank, Bainbridge, & Co., collie quarry proprietors, iron, steel, and metal and mineral merchants, dealers stone, lime, slate, gravel and general requisites, timber merchants, haula tractors, etc. Nominal capital, £2, 2,000 £1 shares.

THE BUILDING TRADE.

HNICAL INSTRUCTION IN BUILDING.

'R. J. LEASK MANSON B.Sc.Eng., (Lond.), recently read an excellent paper on "The Future of Technical ion in Building" at the Municipal al School, Leicester, which was fully ed by diagrams which we regret have space to give. In the course of arks he pointed out the deficiencies ow exist. We are heartily in agreement l he said, more especially with the s which we have italicised.

me deal with a series of facts which are less interdependent," he said, "but wing to their ramifications and the acute l feelings which their discussion generuses, will require me to use (in a mixed e like this) all the tact and discretion h I am capable. I refer now to the ition which in the interests of building on should exist amongst employees, rs, architects, and building teachers. ng first with the attitude towards l education of those employed in the building trades, we come into contact ny facts which to us as teachers are lisconcerting and a few which are ging.

ally speaking, what we know as the trades" in building are almost comprehended in the various trade hence we may consider first the official of these unions, and secondly the attitude of the individual workman.

ne who has been actively associated trade union, and who is a strong bei their necessity and in the undoubted which accrue to their members, it has keen disappointment to find so few and dging references to the value and need ical education for the craftsman. *ay search trade union literature in vain official discussion of the value of education orker, which includes a serious and conreference to technical education. Almost exception the unions show no interest t improvement, restricting themselves to the wage question, workshop conditions, and unemployed benefit, and political*.

are all undoubtedly important things, ink it is a disaster, both to themselves the nation, that they have almost failed to realise that in education, technical education in particular, they nd a mighty lever to raise the status British workman, not only financially, as a craftsman and as a citizen.

rgument is usually advanced that the and-butter questions" absorb all their and that they are "at war" with loyers; but such a plea is no more than is the ill-considered and cheesepolicy now being followed by the ent and by many education authorities g technical education throughout the during the present great crisis. If gs any benefits at all, it ought at least away our sluggishness and stimulate arpen up the tools of peace as well as pons of war.

gst the individual craftsmen the tale is same. All of us could relate instances r own experiences where young and g students have been so ridiculed and in the shop about their attendance echnical school that they have fallen ver to return. This ought not to be. *inding conditions of modern competition rapid growth in strength of the trade urnish the masters with their excuse they do not take more interest in technical n in building.*

dition, we frequently hear the plea l that, since an apprentice usually the close of his apprenticeship, the annot be expected to put himself out of the way concerning the apprentice's instruction for the future as a craftsman beyond what he can pick up in the shop and on the buildings. This and a disbelief in the value of technical instruction work mightily against us.

Fortunately, there are some shining exceptions amongst both masters and men. I could give you extracts from Mr. Smail's Report, in which local branches of various building trades unions offered ready support to new building classes which it was proposed to institute at that time. On many technical and advisory committees throughout the country union representatives have sat alongside the masters and have worked with them in the common cause. At my own school in Leicester the Joiners' Society two or three years ago offered, on their own initiative, to provide special prices for students in the Building Trades Department who were joiners. During the last three months it has been my privilege to sit on the Building Trades Advisory Committee of the City and Guilds, under the chairmanship of Mr. Holliday, of Messrs. Holliday & Greenwood, London, who represents on that Committee the Institute of Builders, and who has for ten years been Chairman of the Governors of the Brixton School of Building, and I am sure that no one could wish for a more sympathetic, broad-minded, and enthusiastic chairman for such a Committee.

Considering next the attitude of the architects to the general technical instruction of those entering building, as distinct from the special training of the architect, there is, I think, a general tendency to give way to a professional pride, which looks askance at the trade-student who studies Building Construction in order to widen his outlook, or at the architectural student who attends trade classes in order to improve his grip upon the details of construction.

Architects are not alone in being at fault through professional pride, but at a time when the architectural profession is claiming more and more to control even the most minute details of construction, and is robbing the craftsman of his few remaining opportunities for showing some initiative, it would be disastrous were they to cut themselves entirely away from the rest of the industry and to hold themselves as a class apart. Their artistic training is, of course, something apart from the training required by the average craftsman, but it is at least shared—or ought to be—by the plasterer, the stonemason, and the decorator; and if their complaint now is that workmen are lacking in the architectural sense and in the personal initiative which characterised the workmen of days now past, then let them realise that both the cause and the cure rests in part with them. The status of the building industry can only be restored if all take their due share of the responsibility of the training and preparation of the coming generations of craftsmen, builders, and architects.

I propose to discuss in the remaining portion of this paper a series of problems of particular interest to the building teacher, and my opinion of his merits and his powers of solving these problems will be indirectly stated there, but I would like to say here just a word or two concerning his general attitude towards co-operation with the sections of the industry which I have already mentioned.

Generally speaking, he is willing and anxious to co-operate, but there are times when perhaps he remembers that in his young and enthusiastic days he sought the aid of the local people and they responded enthusiastically, and possibly formed a building advisory committee, which committee either found an early grave or else grew up so vigorously as to eclipse entirely his own little shining light.

He now says that such co-operation can only be expected when everybody is perfect, forgetting that when such times come the need for advisory committees will apparently not exist.

Generally speaking, however, the building teacher is a man of great faith. His difficulties are many, his encouragements few. He is content with the brief words of gratitude that he occasionally receives from a considerate student, remembering—like a true philosopher—that not many of his students are able to analyse their careers and rightly assess the undoubted benefits which they receive from conscientious technical instruction.

One of the most gratifying features about the Bournemouth Vacation Course, and one which—speaking quite frankly—was probably a great surprise to all concerned, was the hearty and unlimited spirit of co-operation which was shown and which immensely increased the efficiency of the work. Both parties, of course, sent out patrols on the first encounter, and a few shots were exchanged, but the serious purpose and the obvious anxiety evident on both sides to work for the common good removed all further doubts, and the work proceeded with delightful smoothness and regularity to the end.

Without further elaboration, I think I may take it as agreed that before any really complete advance can be made in the matter of technical education in building there must be hearty and ungrudging co-operation between all concerned, mutual suspicions must be removed by generous and frank discussion, and finally each party must try to enter as fully as possible into the difficulties to be faced by the others.

Turning next to some problems with which the building teacher himself has to grapple, you will not misunderstand me if I say that I would have preferred to have devoted my paper entirely to these matters, excepting that I think it is as well that we should realise that there are very important factors outside the schools which have exercised great, and are likely to exercise still greater, influence over our work in the future if progress is to be made.

I have already mentioned that one of the facts which we must carefully consider is that in the last twenty or thirty years improvements in trade practice and in methods of construction that have sprung up within the industry itself have been few and of minor importance. So far as my knowledge carries me such things as wood-working machinery, improvements in workshop control, reinforced concrete, steel construction, methods of waterproofing, of lighting and heating, have originated in the mind of the specialist and the engineer much more than within the industry itself, which has rather accepted these things at first, as bread from heaven—with some initial scepticism—and with the ever-present feeling that they represent the last word in these matters and that nobody but a crank would try and devise further improvements.

My reading of the situation may be wrong, but I feel that in the past the teacher of building has devoted himself too exclusively to constructive detail and too little to those basic principles of physical knowledge from which—if widely disseminated amongst all engaged in the industry—might have sprung inventions and reforms such as have revolutionised engineering during the last twenty years. In addition, the artistic aspect of the crafts should have received more attention.

The drift of my argument will be obvious to most of you, and I need not labour the point further. The recent emphasis upon the need for special instruction for the building student in geometry, mathematics, and science, as applied to building problems is, I think, an advance from which much may be expected in the future. The scheme of work which was studied at Bournemouth was entirely based upon these ideas, and while—for reasons which I cannot enter into here—the work was only discussed so far as it affected the first-year classes of a Senior Course—corresponding to your third year—the general ideas and methods of attack were sufficiently clear to enable the scheme to be applied to later years. But it is necessary to utter some warnings. No man, or group of men, however brilliant or capable, could devise a scheme at the outset of a new movement which could be applied universally without readjustment or alteration. And, while I think it is thoroughly sound to obtain first a good grip upon some such complete scheme—whether it is issued by the Board of Education, propounded at a Vacation Course, or devised by some body like the U.L.C.I., is to some extent a matter of indifference—its chief value lies in its power to enable a man to test new ideas, to discard that which is useless, and to incorporate everything that makes for real progress.

But let us not deceive ourselves. It is not an easy task to devise special classes for building students in mathematics and science, and to revise the other subjects so as to fit into the whole scheme. It is easy to lift chunks from ancient syllabuses on Practical Mathematics, Elementary Physics, Mechanics, Chemistry, and Strength of Materials, but that is not sufficient.

It is essential that the whole scheme be sound from an educational point of view, and that there should be clear ideas as to the preliminary training of the student before he reaches the building teacher, so that he should know how to link on his work to that already done by the student; utilising the student's present fund of knowledge, intensifying the glow of his present interests, and welding the new knowledge to the old. In addition, in arranging the work in the building classes there must be no patchwork, but each item treated must go—in a very definite way—to complete the whole structure of the course. These are a few of the problems which were dealt with at Bournemouth.

The scheme of classes there discusssed was, in outline at least, very similar to that now issued by the U.L.C.I., so that I need not detail it here, but I would like to deal now with a matter which has so far not received much consideration—that is the position occupied by the trade classes under such a scheme.

The general suggestion is that in the early years—your third and fourth years—professional and trade students should combine to take a group course separating later into special trade and professional classes. With certain reservations, this, I think, is an excellent arrangement, particularly in the light of the present situation—*i.e.*, that with a small and apparently decreasing attendance we have attempted to keep up a large number of separate trade classes. This cannot go on indefinitely.

It is my firm conviction that many of our trade syllabuses are on wrong lines; they are too ambitious and too comprehensive. If I were not likely to be misunderstood, I would say that we try and introduce too much pseudo-science, which is of little value to the trade student as such. A trade class is not the place to teach elementary science, but rather affords an opportunity of showing the application of science to the trade. There is room for much reform here."

The lecturer concluded by saying:—

"Above all else, the building teacher of the future must be a big-souled man; his outlook must not be limited by bricks and mortar or by examination results, but he must be able to feel that he is engaged in helping forward one of the most ancient activities of man, which has, as history shows, risen to sublime heights as a visible expression of the nobility of nations now dead; and which, let us hope, will rise to even greater heights, as the national expression of the purified and ennobled British Empire which we all pray may emerge from the tremendous struggle now proceeding."

We have omitted much of a thoughtful and useful paper, but we can be of most service in emphasising our conviction that reform can only arise through the enlargement of the horizon of the trade unionist by the recognition of other factors than wages or self-interest, and by the architect's recognition of the worker as a co-operator and not a simple mechanical executant of orders. The one way is more difficult initially than the other, but only by its means can progress in art be effected. As it is we frequently hear the methods of the past extolled, while those who appreciate these merits do not appear to try to produce an amelioration of existing conditions.

NEW GOVERNMENT CONTRACTS.

War Office.

Nails (Term Contracts).—Guest, Keen, & Nettlefolds, Ltd., Castle Works, Rogerstone, Newport, Mon.; Rylands Bros., Ltd., Warrington.

Paint.—Blundell, Spence, & Co., Ltd., Beverley-road, Hull; Burrell & Co., Ltd., West Ferry-road, Millwall, E.; Colthurst & Harding, Ltd., Alpha Wharf, Millwall, E.; Cowan Bros., Ltd., Magnet Works, Marsh Gate-lane, Stratford, E.; J. S. Craig & Co., Ltd., 97, Portman-street, Glasgow; J. Foulger & Sons, Seven Star-alley, St. George-street, E.; Golden Valley Ochre and Oxide Company, Ltd., Wick, Bristol; J. Hare & Co., Temple-gate, Bristol.

Paint, etc. (Term Contracts).—L. Berger & Sons, Ltd., Homerton, N.E.; Brimsdown Lead Company, Ltd., Brimsdown, Middlesex; Colthurst & Harding, Ltd., Temple-gate, Bristol; Mersey White Lead Company, Ltd., Warrington; Rowe Bros. & Co., Ltd., Old Quay Lead Works, Runcorn; Walkers, Parker, & Co., Ltd., Lead Works, Chester.

Piping and Fittings, Metal.—Scottish Tube Company, Ltd., Clydesdale Tube Works, Rutherglen, Glasgow, etc.; Stewarts & Lloyds, Ltd., Dalmarnock Bridge, Glasgow.

Pumps, etc.—Hayward-Tyler & Co., Ltd., 99, Queen Victoria-street, E.C.; Ingersoll-Rand Company, Sale, Manchester; Lee, Howl, & Co., Tipton; Merryweather & Sons, Ltd., Greenwich-road, S.E.; Pulsometer Engineering Company, Ltd., Nine Elms Ironworks, Reading.

Tools.—Alldays & Onions Pneumatic Engineering Company, Ltd., Birmingham; Armstrong, Stevens, & Son, Ltd., Walsall-road, Willenhall; A. Ashton & Sons, Ltd., Burnt Tree Works, Sheffield; H. Barnard, Plough-lane, Homerton, N.E.; J. Bedford & Sons, Ltd., Ball-street, Sheffield; W. G. Birkinshaw & Co., Reliance Works, Wolverhampton; B. Bladen & Son, Halesowen, Birmingham; C. H. Blakeley & Sons, 165, Napier-street, Sheffield; F. J. Brindley & Sons, River-lane, Sheffield; Brooks & Cooper, Mousehole Forge, Sheffield; J. Brooks (Lye), Ltd., Brook-street, Lye, Stourbridge; Carr, Wild, & Co., Ltd., Egerton-street, Sheffield; C. Churchill & Co., Ltd., 9/15, Leonard-street, Finsbury, E.C.; Drabble & Sanderson, Morpeth-street, Sheffield; J. Evans & Sons, Ltd., Highfield Tool Works, Heeley, Sheffield; B. Fiddian & Son, Stourbridge; W. Gaythwaite, The Forges, Cleator, Cumberland; Hardy Patent Pick Company, Ltd., Heeley, Sheffield; J. Hill & Sons, Mounting Works, Lye, Stourbridge; W. Hunt & Sons (The Brades), Ltd., Brades Steel Works, Birmingham; Lawson & Heaton, Ltd., 315, Long-acre, Nechells, Birmingham; Lockwood Bros., Ltd., Spital-hill, Sheffield; E. & W. Lucas, Ltd., Dronfield Forge and Shovel Works, Sheffield; M. Mellor & Sons, Ltd., Lee Works, Nottingham; Midland Manufacturing Company, Celtic Works, Sheffield; W. Mills & Co., Woodhouse Mill, Sheffield; Motor Stamping Company, Long-acre, Aston, Birmingham; Mountfor, Phillips, & Co., Ltd., Thoms Works, Brierley-hill; I. Nash & Sons, Ltd., Wollaston Mills; Stourbridge; J. Peace & Co., Ltd., Rutland-road, Sheffield; S. Peace & Sons, Ltd., Wellmeadow-street, Sheffield; W. K. & C. Peace, Ltd., Rutland-road, Sheffield; J. Perks & Sons, Ltd., Monmore Green Works, Wolverhampton; J. W. & H. Platt, Byron Works, Bouverie-road, Harrow; G. Plumpton, Ltd., Albion Works, Warrington; Portable Furnace and Patents Company, Ltd., Carrington, Nottingham; J. Powell, Ltd., Oxford-street, Birmingham; Ruston, Proctor, & Co., Ltd., Lincoln; Sanderson Bros. & Newbould, Ltd., Newhall-road, Sheffield; Sheffield Hack Saw Company, Bridge-street, Sheffield; T. Smith & Sons (Saltley), Ltd., Saltley Mill, Birmingham; Spear & Jackson, Ltd., Aetna Works, Savile-street East, Sheffield; J. H. Swift & Sons, Ltd., Penistone-road, Sheffield; Swindell & Co., Ltd., Withymoor Works, Netherton, Dudley; Taylor Bros., Adelaide Saw Works, Sheffield; C. Thomas & Co., Ltd., Aston Manor, Birmingham; L. Thomas & Co., Coaley, Dursley, Glos.; G. Thornton & Co., Ltd., Tividale, Tipton; J. Tyzack & Son, Ltd., Meersbrook Works, Valley-road, Heeley, Sheffield; W. Tyzack, Sons, & Turner, Ltd., Little London Works, Sheffield; S. Vaughan, Ltd., Henry-street, West Bromwich; Ward & Payne, Limbrick Works, Hillsborough, Sheffield; C. Whitehouse & Sons, Ltd., Cannock; J. Wilkinson, jun. (Dudley), Ltd., Freebodies Works, Dudley; G. Wolfe & Sons, Ltd., Bathgate; F. Wood & Sons, Thorpe Works, Henry-street, Sheffield; Wynn, Timmins, & Co., Ltd., Commercial-street, Birmingham.

PROPOSED NEW BUILD
AND OTHER WORKS

In these lists care is taken to en
accuracy of the information given, bu
occasionally happen that, owing to
owners taking the responsibility of com
work before plans are finally approve
local authorities, "proposed" works
time of publication, have been actua
menced. Abbreviations:—T.C. for
Council; U.D.C. for Urban District
R.D.C. for Rural District Council;
Education Committee; L.G.B. for
Government Board; B.G. for B
Guardians; L.C.C. for London County
B.C. for Borough Council; and P.C. fo
Council.

Argentina.—The *Boletin Oficial*
Aires) of February 10 publishes a
approving a project prepared by the "M
de Relaciones Exteriores y Culto" re
the construction of a hospital in
(Misiones) at an estimated cost of 346,
currency (about £30,300).

Bexhill.—Plans passed by the T.C.:—
house, Terminus-avenue (Mr. G. E. M
Mr. H. P. Farnfield; detached house,
drive (Mr. G. E. Maynard), Mr. P.
pair of cottages, Cooden Sea-road
Stevens & Son), Miss G. Kershaw; add
"Deema," Sea-road (Mr. G. H. Gra
L. M. Williams; detached house in
drive (Messrs. Tubbs, Messer, & Poult
F. J. Browell; garage at "The Corn
Cooden Sea-road (Messrs. Tubbs, M
Poulter), Mr. H. Turner; coal store, 6
ham-avenue (Mr. J. B. Wall), Mrs
Walker; hand lift at rear of 12, Clif
(Messrs Upfield & Sons), Messrs
Stapylton-Smith. Temporary building
shed, Little Common-road, for Mrs
Escombe; and a motor house, 72, Stat
for Mr. H. W. H. Palmer.

Buckingham.—At a recent meeting
R.D.C. the Clerk produced the draft of
ment between Mr. Jones and the Cha
reference to a portion of a field they
chased for the proposed new isolation ho
Gawcott. The matter was referred
Committee.

Cornforth.—The Sedgefield B.G. has
plan for an additional classroom at the
Hall, Cornforth.

Coventry.—Plans approved by the
Works Committee of the City Counci
houses (amended), Kingsland-avenue, fo
Barrett; hutment, Stoney Stanton-road
Young Men's Christian Association; or
Rochester-road, for Mr. T. F. Bird; tw
Binley-road, for Mr. C. Blockley; add
premises, Far Gosford-street, for M
Perkins & Co.; laboratory, Cash's-lane
Standard Motor Company, Ltd.; ar
room, etc., Edgewick Works, Canal-road
Alfred Herbert, Ltd.; store shed, Upp
street, for Mr. Alfred Herbert, Ltd.; ca
shop, etc., Cash's-lane, for the Standa
Company, Ltd.; six houses, Queen Ma
for Mr. J. Clifton; factory Hawkins-
the Metallurgical Company; two
houses, Churchill-avenue, for Mr. J. W
four houses, Collingwood-road, for M
Hewlett; building line, etc., Stoney
road, for Mr. Alfred Herbert, Ltd.; i
Harnall-lane, for Messrs. Bretts'
Company

Dundee.—At a Dean of Guild Cour
Mr. James Williamson Masson, Nee
applied for permission to convert the
second floors of his property in County
two dwelling-houses, and to make imp
on the ground floor of the licensed
known as the Burns Tavern, and to er
façade to the ground floor. The p
passed.

Fulham.—We understand that Mr
Stoll has purchased a portion of the si
ham on which dwellings for disabled s
to be erected, and has made a gift o
to the fund.

Glasgow.—The following linings h
granted by Glasgow Dean of Guild Co
James Johnston, C.A., 190, West Geo
Glasgow, and others, to erect a recre
and rooms in Craigmont-drive, Mar
Clyde Structural Iron Company, Ltd.,
Iron Works, Scotstoun, to erect bu
South-street, Scotstoun; the Cassel Cya
pany, Ltd., 19, St. Vincent-street, G
make extensions to their still and roas
in the works in Shuna-street, Glasgo
John Broadfoot & Sons, Ltd., Inchho
James-street, Whiteinch, to erect a
there; Scottish National Council of Yo
Christian Associations, 118A, George-st
burgh, to erect a temporary institu
corner of London-road and Sum
Glasgow.

Goole.—The U.D.C. has approved of
a new power station at Rawcliffe

Holmfirth.—A L.G.B. inquiry has
in connection with the U.D.C.'s propo
for working-class dwellings.

India.—The waterworks scheme o
Municipality has received the adm
approval of Government.

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* See also our list of Competitions, Co
on page 272.

n.—A scheme for the improvement of dy-street area has been prepared by the Green B.C.

esbrough.—At a recent meeting of the brough Plans Committee plans were i of a new internal arcade on the of Messrs. Dickson & Benson, Ltd., in e-road. Mr. James Forbes, architect, d a set of plans for the Britannic Shoe y, who are about to open premises in e-road.

Zealand.—With reference to the raising of £115,000 for the purpose of carrying ain public works at Auckland, over will be spent on the Council's market undertaking. The City Engineer has a report in regard to city improvement and other desirable works which should e attention of the Council during the years.

wshire.—A L.G.B. inquiry has been ating to an application by the Upper Committee of Renfrewshire for authority re a town-planning scheme for the of Cathcart, Eastwood, and Mearns, g Clarkston, Busby, Giffnock, Thornlie- d Newton-Mearns.

.—The U.D.C. has approved the follow- s:—Mr. W. Wiggins, for additions to morton-road; Messrs. G. W. & F. for three houses on Park-road.

y.—The U.D.C. has approved the plan sed bungalow abutting on Dudley-road ed by Colonel Nayler).

—The *Gaceta* of March 13 notifies that will be opened on April 15 by the muni- horities of Mota del Marqués (Province dolid) for the construction of a new t that town, at an estimated cost of setas (about £3,260).

g.—The T.C. has granted a warrant to James Ronald & Sons, civil engineers, s. and surveyors, to erect a garage at row.

ge.—At a recent meeting of the B.G. veyor's estimate for carrying out the of drainage for the parish of East was received. It was resolved that the forwarded to the L.G.B., and that appli- e made for sanction to borrow £600 to t the scheme after the termination of

h.—The T.C. has passed plans submitted R. W. Booth for a motor-house in Clark- ne, and by Messrs. Curry, Ltd., for a Norfolk-street.

—The Carnegie United Kingdom Trust ied the Corporation that the Trustees are to make a grant of £12,000 for the of a suitable library. The following ve been approved by the Streets and s Committee:—Messrs. Brown Bros. & Ltd., shop, Peter-lane; Asiatic Petro- mpany, Ltd., oil tanks, etc., Layerthorpe Mrs. Abbey, combined drainage, 30 and ge-street and 1 and 10, Mill-street; Mr. , redrainage, 3-8, Clark's-terrace, Walm- dcaster Tower Brewery Company, new ing outbuildings, Barrack Tavern, Ful- ; Directors of York Opera House Com- lterations to gallery, Clifford-street; Beckett & Co., temporary motor shed, am-terrace; Messrs. De Burgh Bros., drainage, Albemarle-road.

TRADE NEWS.

the direction of Mr. G. T. Bassett, A., architect, Aberystwyth, Boyle's tent "air-pump" ventilators have lied at the University College of Wales, yth.

ew National Bank, Blackrock, Co. is being supplied with Shorland's Manchester stoves with descending ues by Messrs. E. H. Shorland & Ltd., of Failsworth, Manchester.

derstand that the walls of a Sunday- Pudsey, near Leeds, built about 8 ft. e ground level, became so saturated the dado, floor boards, and joists. lls have since been rendered in Pud- ent, and we hear that, although the has been exceptionally severe, the now perfectly dry.

informed that the Admiralty, after g tests with various classes of , for the purpose of ascertaining the able for the manufacture of naval and seaplane propellers, have d" "Croid" (extra strength "Croid" in its standard strength s commonly employed by cabinet- nd others on account of its being a cold state as well as on account of ty. The makers of "Croid" are oved Liquid Glues Company, Ltd., Hermitage-street, London, E. We ived a sample of "Croid" from the some tests of which bear out the ade for the material. It appears to le for general use and is an easily ted and useful material.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Brick-layers.	Car-penters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Masons' La-bourers.	Brick-layers' La-bourers.	Plas-terers' La-bourers.
	d.	d.	d	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7½	7½	7½
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	11	11	10	9	9½	10	9½	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8½	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	9¾	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¼	5¼	5¼
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10½	10½	10	10	8½	7½	7½	8
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	9½	10½	9	8½	8½	9
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	9½	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7½
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10½	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9¼	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7½	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8½	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	10	8	10	8	7½	7½	7½
Worcester	8½	9½	9½	9	9	9	7½	6½	6½	6½
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk** (*) a **advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, —; Auction Sales, xxiv. Certa conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bi themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be ma for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willi to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while eve endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

April 8.—**Enzie.**—Slater Work, etc.—For the slater work of new cattle courts to be erected at Burnside of Dipple and Dipple, and for the mason, carpenter, and slater work of new cattle court at Berrybauds, Enzie. Plans and specifications may be seen at the Estates Office, Fochabers.

✱ April 8.—**Farnborough.**—Small Houses.—Tenders are invited for the erection of thirty small houses.

April 10. — **Holbeck.** — Painting, etc. — For painting the ceilings and washing the walls of the hospital for the B.G. Forms of tender of Mr. George Diment, Clerk to the Guardians, Poor Law Offices, Holbeck, Leeds.

April 10.—**New Byth.**—Slater Works, etc.—For (1) mason, carpenter, and slater works for part of new offices at Roundhill (Auchnie), New Byth, and (2) mason, carpenter, slater, and plaster works for new dwelling-house at Hill of Mill of Byth (Halket), New Byth. Plans, specifications, etc., can be seen at the farms, or with Messrs. Davidson & Garden, 12, Dee-street, Aberdeen.

April 11.—**Aberfan.**—Alterations.—For alterations to the Navigation Hotel, Aberfan, for the Rhondda Valley Breweries Company, Ltd. Plans may be seen and quantities obtained at the offices of the Brewery, Pontypridd. Mr. T. F. T. Jarvis, F.C.I.S., Secretary.

April 11.—**Belfast.**—Painting.—For painting at the Throne Hospital, Belfast. Specification from the Superintendent of the Royal Victoria Hospital, Grosvenor-road.

April 12.—**Selby.**—Cottages.—For the erection of thirty to 100 cottages on land at Selby for the U.D.C. Plans, etc., of Mr. Bruce Gray, C.E., F.R.S.(Edin.), Council-chambers, Selby.

No Date. — **Carnarvon.** — Schoolroom.—For the proposed new schoolroom, etc., for Pendref Chapel, Carnarvon. Names to Mr. Watkin W. Jones, architect and surveyor, "Kuantan," Carnarvon.

No Date. — **Woodthorpe.** — House.—For the erection of a detached house at Woodthorpe, near Wakefield. Mr. W. Wrigley, A.R.I.B.A., architect, 2, King-street, Wakefield.

FURNITURE, MATERIALS, etc.

April 8.—**Dundee.**—Materials.—Supply to the T.C. of builders' materials. Specifications, etc., at the office of the City Engineer. Mr. Jas. Thomson, City Engineer, 91, Commercial-street, Dundee.

April 10.—**Glasgow.**—Materials.—Supply to the Corporation of builders' materials, etc., for the Gas Department, for six or twelve months. Specifications, etc., of Mr. Alexander Wilson, Gas Engineer, 45, John-street, Glasgow.

April 11.—**Belfast.**—Fitting Up.—For fitting up operating theatre at Dufferin Hospital for Children for the B.G. Plan and specification by Messrs. Young & Mackenzie, architects and engineers, Belfast. Copies of specification, etc., of Mr. R. H. Wilson, Clerk of the Union, Clerk's Office, Union Workhouse. Deposit, 5s.

April 11.—**Glasgow.**—Lime and Cement, etc.—Supply to the Corporation Tramways Department of lime and cement, and paints. Specifications, etc., of Mr. James Dalrymple, General Manager, 46, Bath-street, Glasgow.

April 12. — **Lanark.** — Oils.—Supply to the District Committee of the Middle Ward of the County of Lanark of oils, grease, etc., for their Dunduff Quarry, near Blackwood. Forms of specification from the Subscriber.

April 15. — **Renfrewshire.** — Paints, etc.—Supply to the Renfrewshire Combination Poorhouse for three, six, or twelve months, of paints and oils. Conditions of contract, etc., of Mr. Alex. Meikle, Secretary, Parish Council Office, Houston.

ENGINEERING, IRON, AND STEEL.

April 12.—**Glasgow.**—Rainwater Conductors, etc.—For rainwater conductors and iron drains required in connection with the extension of the municipal buildings for the Corporation. Specifications and forms of offer may be obtained from Mr. J. Lindsay, Town Clerk, City-chambers, Glasgow. Deposit, £1 1s.

April 14.—**London.**—Radiator, etc.—Supply to the Commissioners of His Majesty's Works, etc., of (*a*) corner radiator, check, bib, steam stop and full-way gate valves; (*b*) oil heaters (500). Forms of tender, etc., of the Controller of Supplies, H.M. Office of Works, King Charles-street, Westminster, S.W.

ROAD, SANITARY, AND WATER WORKS.

April 8.—**Dorking.**—Tarred Slag.—Supply to the U.D.C. of tarred slag, etc., for the period ending March 31, 1917. Forms of tender, etc., from Mr. William A. Clegg, Surveyor, Council Offices, Dorking.

April 10.—**Pocklington.**—Stone.—Supply to the R.D.C. of best blue stone and slag for repairing roads. Forms of tender of Mr. Arthur J. Oliver, Clerk, Pocklington.

April 11.—**Reigate.**—Material.—Supply to the B.C. of road materials. Forms of tender, etc., of Mr. Fred T. Clayton, Borough Surveyor, Municipal Buildings, Reigate.

April 12.—**Aldershot.**—Basalt, etc.—Supply to the U.D.C. of broken Devon, Welsh, or Clee Hill basalt or Leicester granite and slag tarmac during the six months ending September 30 next; also dehydrated tar, tar composition for tar spraying, asphalt bitumen, limestone tar-paving. Mr. D. Llewellyn Griffiths, Clerk to the Council, Municipal Buildings, Aldershot.

April 15.—**Wrotham.**—Flints, etc.—Supply to the U.D.C. of flints, ragstone, ironstone, and gravel. Forms of tender, etc., of Mr. F. T. Elliott, Surveyor of the Council, Borough Green.

April 13.—**Linlithgow.**—Tar Macadam.—For laying about three miles of the Cramond Bridge road with tar macadam for the C.C. Form of tender, etc., of Mr. A. M. Smith, County Road Office, Linlithgow.

April 15.—**Thurnscoe.**—Materials.—Supply to the U.D.C. of road materials for the year ending March 31, 1917. Forms of tender of Mr. J. Ledger Hawksworth, Clerk to the Council, Council Offices, Bolton-on-Dearne.

April 17.—**East Preston.**—Flints.—Supply to the East Preston R.D.C. of about 3,510 cubic yds. of flints. Forms of Mr. Arthur Shelley, Clerk, Littlehampton.

April 17.—**Sevenoaks.**—Granite, etc.—Supply to the U.D.C. of granite or quartzite. Forms of tender of Mr. Samuel Towlson, C.E., Surveyor to the Council, Argyle-road, Sevenoaks.

April 18.—**St. Neots.**—Material.—Su the U.D.C. of Leicestershire granite. Welsh or Cornish granite, slag tar ma fine slag. Form of tender of Mr. John Town Surveyor, Offices, Corn Exchan Neots.

April 24.—**Edinburgh.**— Materials.— to the Mid-Lothian C.C. of road materi the year ending May 15, 1917. Sched quantities, etc., at the Road Office, Buildings, Edinburgh.

No Date.—**Ashington.**—Stable, etc.— erection of a twelve-stalled stable, loose greengrocery warehouse, etc., for the E Co-operative Society, Ltd., at Ashington. to Mr. Osborne Blythe, Licentiate, R architect, Ashington.

Auction Sales.

✱ April 10.—**Strode.**—Messrs. Kidwell will sell by auction, at Commercial- quantity of timber.

✱ April 11.—**Southampton.**—Messrs. R. & Wyatt will sell by auction at the quantity of well-seasoned, dry timber.

✱ April 19.—Messrs. Churchill & Si sell by auction, at the Great Hall, Wi House, Old Broad-street, E.C., an ass of deals, battens, boards, timbers, etc.

✱ April 19.—**City-road, N.**—Mr. F. G. will sell by auction on the premis machinery, plant, and stock of a build contractor.

✱ May 2.—**Epsom.**—Messrs Debenham son, and Chinnocks will sell by auction Mart a freehold building estate.

BUILDING MATERIAL, ETC., NEW ZEAL

With reference to the notice on page the *Board of Trade Journal* of Decem last, relative to the raising of a loan of £ for the purpose of carrying out certain works at Auckland, the following par regarding the progress of the under are taken from a newspaper extract for by the Office of H.M. Trade Commissio New Zealand:—The Mayor of Auckland on December 31 last that the Council's scheme had matured and tenders buildings would probably be invited in ary. Over £50,000 will be spent on this taking. The water reticulation sch Grey Lynn, a suburb of Auckland, £10,000, was expected to be put in han the end of January. A considerable of drainage work was done through city in 1915, and a commencement has been made on the new drainage works Remuera district, another suburb; th undertaking involves an expenditure of The Mayor added that the City Engin preparing a comprehensive report in re city improvement schemes and other d works which should claim the attentio Council during the next few years.

[Those with an asterisk (*) are advertised in this issue.]

S CURRENT OF MATERIALS.

to the exceptional circumstances which t the present time, prices of materials confirmed by inquiry.]

ur last issue sheet lead has been reduced; turps lead increased.—ED.

im in this list is to give, as far as possible, the ices of materials, not necessarily the highest Quality and quantity obviously affect prices which should be remembered by those who of this information.

BRICKS, &c.

00 Alongside, in River Thames.	£ s. d.
ks	2 0 0
ocks for Facings	2 12 0

000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
......	1 10 0	Best Blue Pressed	
ham		Staffordshire ..	5 0 0
......	3 12 0	Do. Bullnose ..	5 5 0
Pressed		Best Stourbridge	
Facing	5 5 0	Fire Bricks ..	4 15 0
RICKS—			
White,		D'ble Str'tch'rs	18 17 6
and		Double Headers	15 17 6
Glazed		One Side and	
rs ..	13 7 6	two Ends	19 17 6
......	12 17 6	Two Sides and	
ullnose		one End	20 17 6
½ in.		Splays and	
......	16 17 6	Squints	18 7 6

ond Quality £1 per 1,000 less than best.

	s. d.	
allast	7 9	per yard, delivered.
d Pit Sand	8 0	,, ,, ,,
ed Sand	9 0	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
and Cement	2 5 0	..	2 8 0

ls. alongside in 80-ton lots.

2s. 6d. per ton extra on above.

nd Blue Lias Lime.... 1 5 6 at rly. depôt.

he cement or lime is exclusive of the ordinary charge for sacks.

e Lime .... 18s. 0d. per yard delivered.

e Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
NE—delivered in railway trucks at rne Park, Paddington, G.W.R., or ambeth, G.W.R., per ft. cube	1 7
elivered in railway trucks at Nine . & S.W.R., per ft. cube	1 8¾
elivered on road waggons at Nine Elms	1 9¼

STONE—

Whitbed, in random blocks of 20 ft. ge, delivered in railway trucks at ourne Park, G.W.R., South Lambeth, R., or Nine Elms, or L. & S.W.R. per ft.	2 5½
delivered on road waggons at Pimlico f or Nine Elms Depôt, per ft. cube ..	2 6½

asebed, 2d. per ft. cube extra.

LOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
h blocks ..	2 0	Closeburn Red	
ocks	1 7¼	Freestone	2 2
n blocks	2 4	Red and White Mans-	
Dale in		field Random block	2 9
....	2 5	Yellow Magnesian	
		Limestone do. do.	3 3

NE—*Robin Hood Quality.*

. Cube, Delivered at Railway Depôt.	s. d.
andom blocks	3 4

Ft. Super., Delivered at Railway Depôt.

n two sides landings to sizes (under per.)	2 5
d two sides ditto, ditto	2 8
two sides slabs (random sizes)	1 0½
in. sawn one side slabs (random sizes) ..	0 8¼
in. ditto, ditto	0 6¾

K—

Ft. Cube, Delivered at Railway Depôt.

andom blocks	3 0

Ft. Super, Delivered at Railway Depôt.

two sides landing to sizes (under 40 ft.	2 3
d two sides ditto	2 7
two sides slabs (random sizes)	1 0
ced random flags	0 5

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
ine-made tiles or hand-made sand- tiles from either Broseley or shire district	2 12 6
l ditto	2 15 0
lley tiles (per dozen)	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£ s. d.
Bangor slates, 20 by 10	11 16 0
ty ,, ,,	11 10 0
,, 16 by 8	5 15 0
Portmadoc, 20 by 10	11 13 6
ty ,, ,,	11 3 6
,, 16 by 8	5 15 0

WOOD.

prices should be confirmed, as the market is *changing daily.*

LDING REDWOOD.

orted sizes.	Per standard. £ s. d.		£ s. d.
n. by 12 in., 4 in. in., 3 in. by 11 in., by 9 in., and 2 in. in.	33 10 0	..	34 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard.		
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32 10 0	..	33 10 0
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	31 10 0	..	32 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0		more than battens.
¾ in.	1 0 0		
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best.
Best Middling Dantzic and Memel Fir Timber Logs (average specification) ..	Per load of 50 ft. cube. 10 0 0	..	—
Seconds do. do.	9 10 0	..	—
9 in. to 10 in. do.	8 10 0	..	—
6 in. to 8 in. do.	8 0 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	11 0 0	..	12 0 0
Do. 6 in. to 10 in.	9 0 0	..	10 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0

	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Under 2 in. thick	0 10 0		extra.

JOINERS' WOOD.

White Sea Second Quality Red:			
4 in. by 11 in.	39 0 0	..	40 0 0
3 in. by 11 in. and 2 in. by 11 in.	38 0 0	..	39 0 0
4 in. by 9 in.	37 0 0	..	38 0 0
3 in. by 9 in. and 2½ in. by 9 in.	36 0 0	..	37 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	33 0 0	..	34 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Third quality	2 0 0		less than best.
Fourth quality	£2 to £3		less than seconds.

Archangel White Deals—			
Best 3 in. by 9 in. and 10 in. and 11 in.	36 0 0	..	37 0 0
Seconds, do.	2 0 0		less than best.
U.S. Battens	30 0 0	..	32 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—	Per square actual.		
1¼ in. by 6½ in. planed and shot	1 16 0	..	1 19 0
1¼ in. by 6½ in. planed and matched	1 16 6	..	1 19 6
1 in. by 6½ in. planed and shot	1 9 0	..	1 12 0
1 in. by 6½ in. planed and matched	1 9 6	..	1 12 6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1 4 0	..	1 6 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
⅝ in. by 6½ in. do.	1 0 0	..	1 1 0

	Per standard.		
Columbian or Oregon Pine, best quality	42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		,,
Seconds, regular sizes ..	43 10 0		,,
Oddments	37 10 0		,,
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super., as inch	0 1 0	..	0 1 3
¾ in. do. no...	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super., as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super., as inch	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut..	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions..	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

Turning extra.

METALS (*Continued*).

	Per ton, in London. £ s. d.		£ s. d.
IRON—			
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality ..	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0
Steel Bars, Ferro-Concrete quality, £18 basis price.			
Hoop Iron, basis price	19 10 0	..	20 0 0
,, ,, Galvanised	30 0 0	..	

(*And upwards, according to size and gauge.)

Sheet Iron Black—			
Ordinary sizes to 20 g.	19 10 0	..	20 0 0
,, ,, 24 g.	20 10 0	..	21 0 0
,, ,, 26 g.	21 10 0	..	22 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	30 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	30 10 0	..	—
Ordinary sizes to 26 g.	33 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	31 0 0	..	—
,, ,, 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g.	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g.	20 15 0	..	—
Best Soft Steel Sheets, 26 g. ..	22 10 0	..	—
Cut Nails, 3 in. to 6 in.	21 0 0	..	21 10 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
LEAD—Sheet, English, 4 lb. and up		41 10 0	..	—
Pipe in coils		42 0 0	..	—
Soil pipe		45 0 0	..	—
Compo pipe		45 0 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—				
Strong Sheet	per lb.	0 1 5	..	—
Thin ,,	,,	0 1 6	..	—
Copper nails	,,	0 1 5	..	—
Copper wire	,,	0 1 5	..	—
BRASS—				
Strong Sheet	,,	0 1 3	..	—
Thin ,,	,,	0 1 4	..	—
TIN—English Ingots ..	,,	0 1 10	..	—
SOLDER—Plumbers' ..	,,	0 0 11	..	—
Tinmen's	,,	0 1 2	..	—
Blowpipe	,,	0 1 4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.
,, fourths	6¼d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral, white..	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d
Raw Linseed Oil in pipes	per gallon	0 3 6
,, ,, ,, in barrels	,,	0 3 7
,, ,, ,, in drums	,,	0 3 10
Boiled ,, ,, in barrels	,,	0 3 9
,, ,, ,, in drums	,,	0 4 1
Turpentine in barrels	,,	0 4 3
,, in drums	,,	0 4 6
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	54 0 0
Red Lead, Dry	per ton	56 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots	per ton delivered	66 0 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

ASPATRIA (Cumberland).—For additions to the butcher's department of the Aspatria Industrial Co-operative Society, Ltd. Messrs. W. G. Scott & Co., architects and surveyors, Workington :—

		£	s.	d.
Builders: Davidson & Son, Aspatria	....	£150	0	0
Joiner: R. Bragg, Workington	....	108	11	5
Plasterer: T. Kirk, Maryport	....	49	5	10
Slater: C. Burrow, Workington	....	25	11	7
Plumber: G. Goodhall, Aspatria	....	12	16	8
Painter: G. Goodhall, Aspatria	....	8	5	0

LONDON.—Accepted by the Asylums Committee of the London County Council for the supply of stores, etc. :—

Painters' Materials.—All Asylums.—Craig & Rose, Ltd.; T. & W. Farmiloe, Ltd.

Varnishes.—All Asylums.—R. Kearsley & Co.; Mander Brothers; L. Berger & Sons, Ltd.; G. Hadfield.

Lead, etc.—All Asylums.—J. Chater & Sons.

Glass.—All Asylums.—J. Chater & Sons.

Builders' Materials.—Banstead.—Wm. Whiteway & Co.; J. H. Turner & Lisney, Ltd.; Associated Portland Cement Manufacturers (1900), Ltd.; J. Knowles & Co. (London), Ltd. Bexley.—Doulton & Co., Ltd.; Erith & Co., Ltd.; Wm. Whiteway & Co.; Associated Portland Cement Manufacturers (1900), Ltd.; J. Knowles & Co. (London), Ltd. Cane-hill.—W. J. Copper. Claybury.—Young & Son; Erith & Co., Ltd.; J. H. Turner & Lisney, Ltd.; Doulton & Co., Ltd.; Wm. Whiteway & Co.; J. Knowles & Co. (London), Ltd. Colney Hatch.—Young & Son; Erith & Co., Ltd.; Wm. Whiteway & Co.; B. Finch & Co., Ltd.; A. Eames; J. Knowles & Co. (London), Ltd.; H. F. Brooks. Hanwell.—H. S. Timpson; F. & C. Macklin; Erith & Co., Ltd.; Wm. Whiteway & Co.; Young & Son; J. Knowles & Co. (London), Ltd. Institutions on Horton Estate.—Wm. Whiteway & Co.; J. Tylor & Sons, Ltd.; B. Finch & Co., Ltd.; E. Longhurst & Sons; Young & Sons; Doulton & Co. Ltd.; J. Knowles & Co. (London), Ltd.

Timber.—Bexley, Cane-hill, Claybury, Colney Hatch, Hanwell, and Institutions on Horton Estate.—King & Scarborough; Ingram, Perkins, & Co.

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G. Longhurst & Co., 213, Cowley-road, Oxford* £295

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Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PATENTS.

APPLICATIONS PUBLISHED.*

11,878 of 1915.—Luigi Sarzotto: P pavilions and the like.

14,080 of 1915.—James Dowson Ja Continuous flow water heater, principa domestic purposes.

14,501 of 1915.—Martin McDonald knobs.

15,195 of 1915.—Maurycy Ignacy Pozn Processes for the manufacture of artificia slabs.

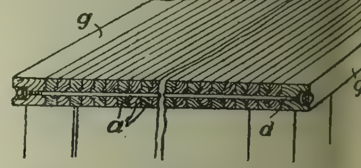
17,440 of 1915.—Milton Olin Spi Slide rules.

17,739 of 1915.—Alliott Verdon Ro for holding covers and the like.

SELECTED PATENT.

21,988 of 1914.—William Robert W Preventing warping of woodwork.

This relates to means for preventing w due to heat, in which table-tops, drawer and other woodwork articles in bakeri are constructed of a series of long narrow of wood with interengaging tongues and



21,988 of 1914.

held together by transverse bolts wit or other tightening means. In the tal the pieces of wood *a* have right-angled and grooves, and the tightening nuts bolts *d* are sunk in recesses in the side-p The depth of the grooves may be great that of the tongues, and the tongues a grooves may be tapered in cross-secti

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* All these applications are in the s which opposition to the grant of Patent them can be made.

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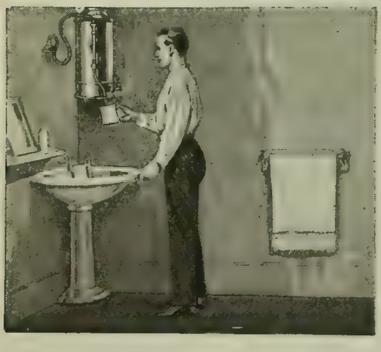

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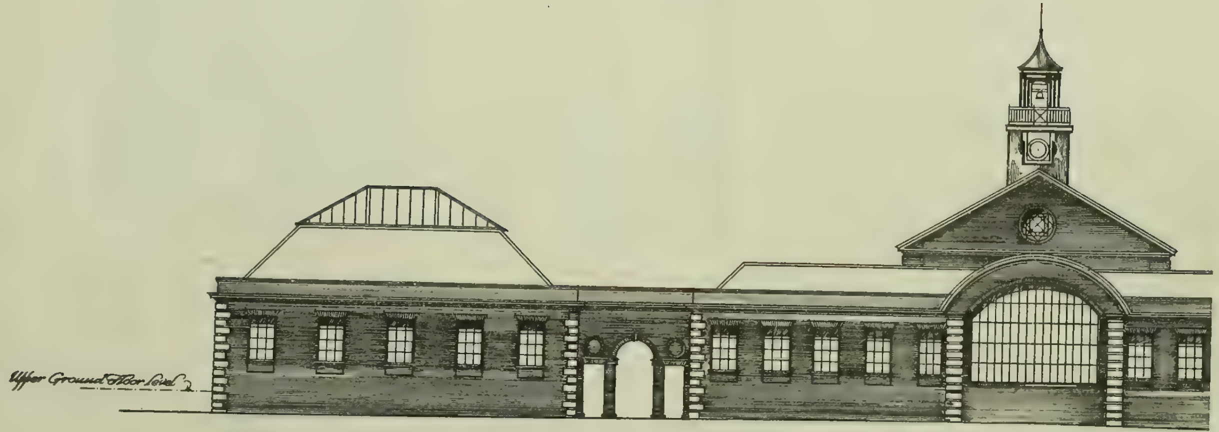

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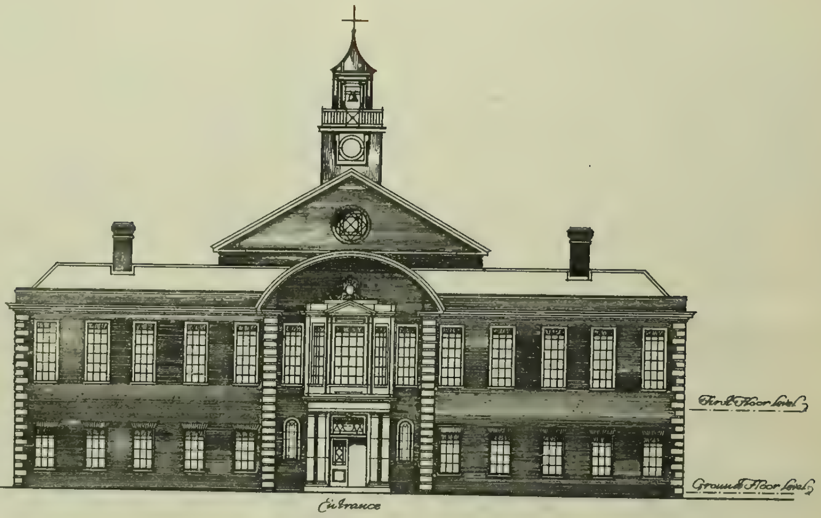

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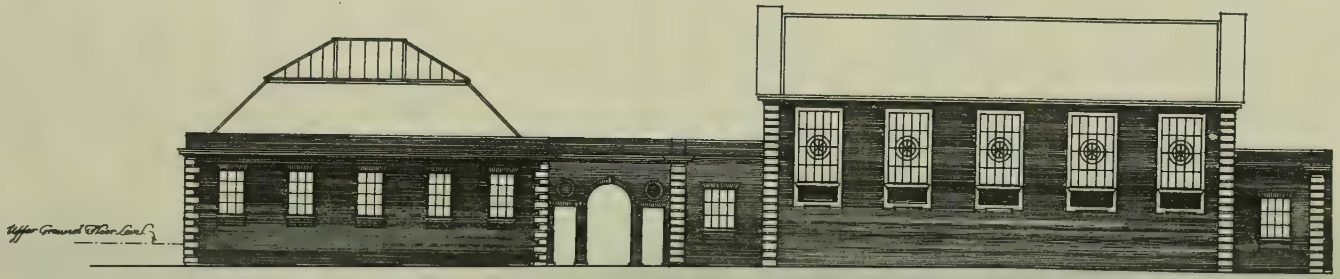

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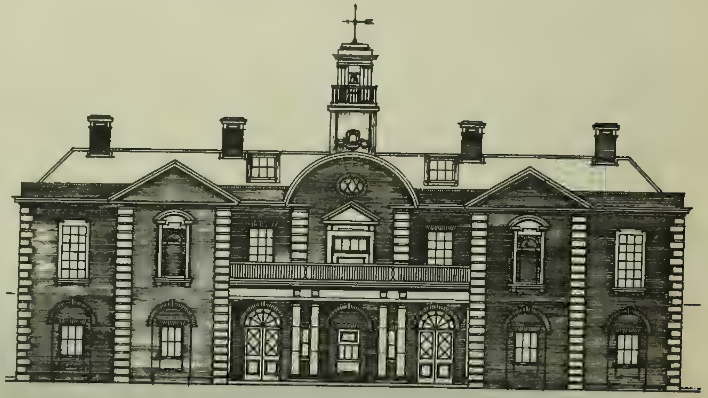
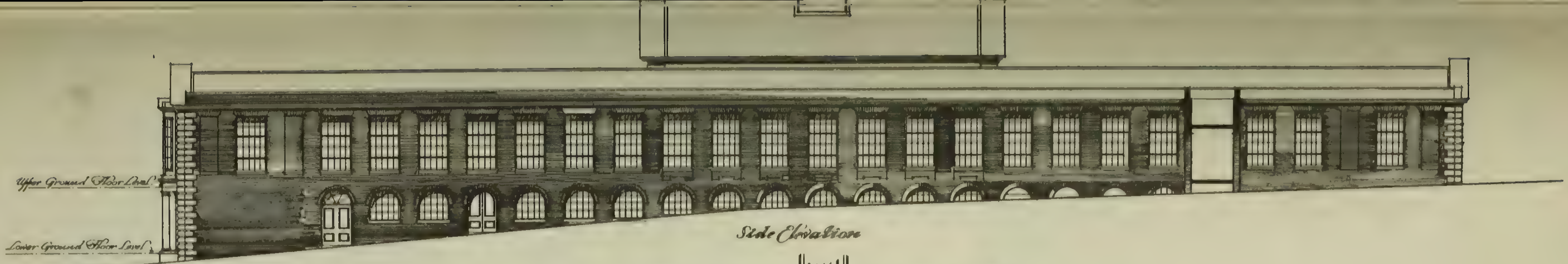


The Front Elevation.

LVTON SCHOOL FOR GIRLS



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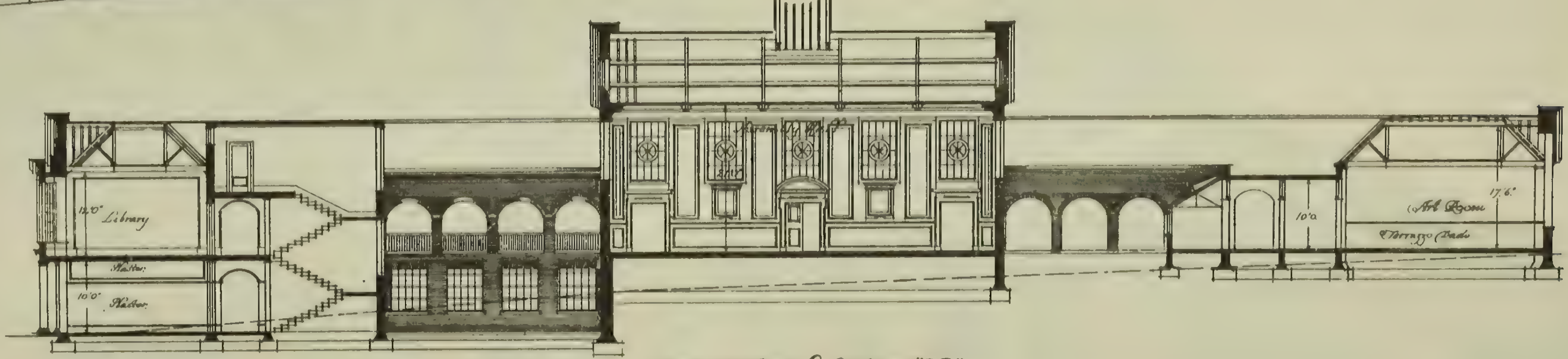
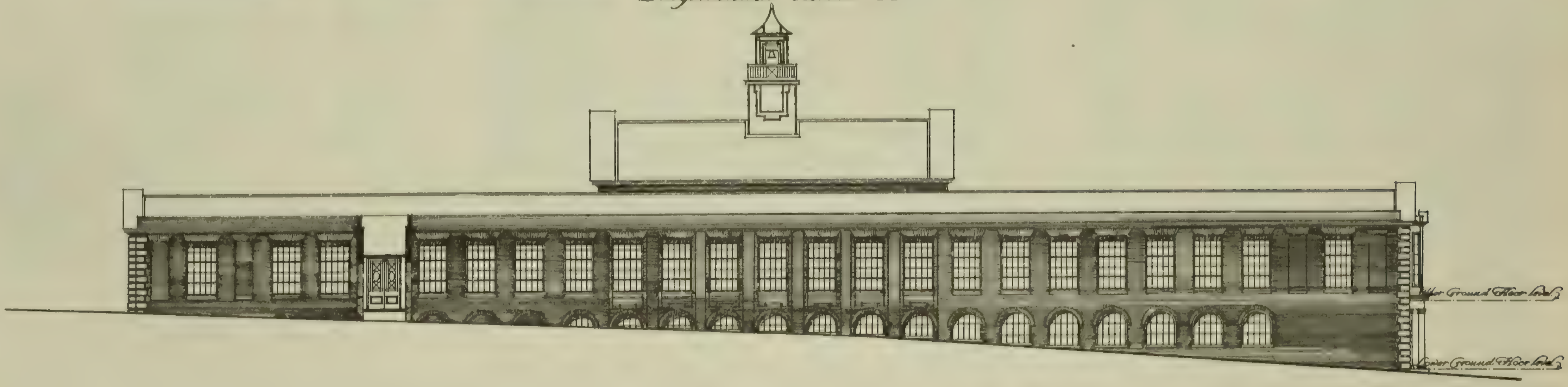
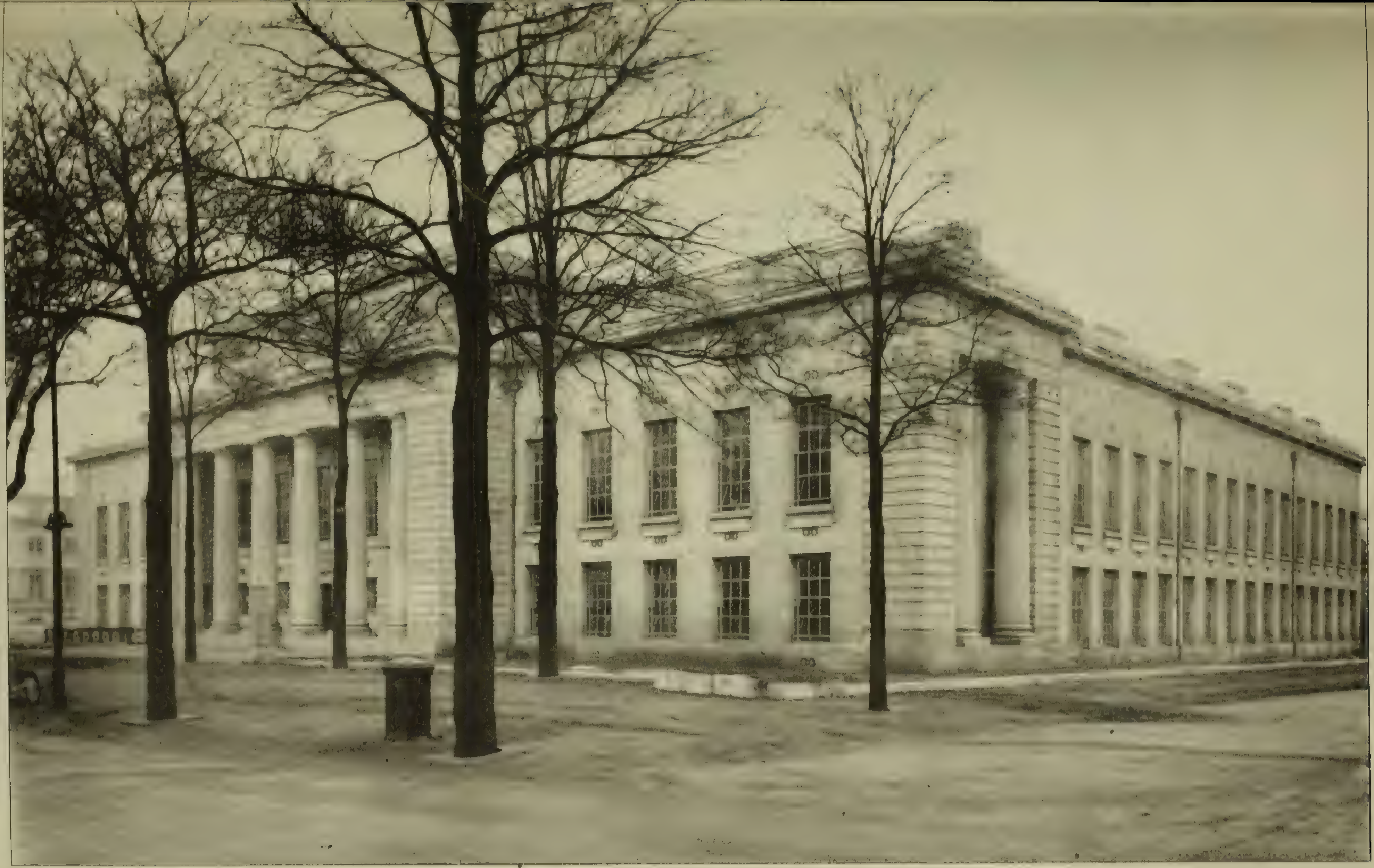


Longitudinal Section "BB."



Side Elevation.

LUTON SECONDARY SCHOOL: SCHEMES A AND B.—DESIGNS BY MR. A. W. S. CROSS, F.R.I.B.A.



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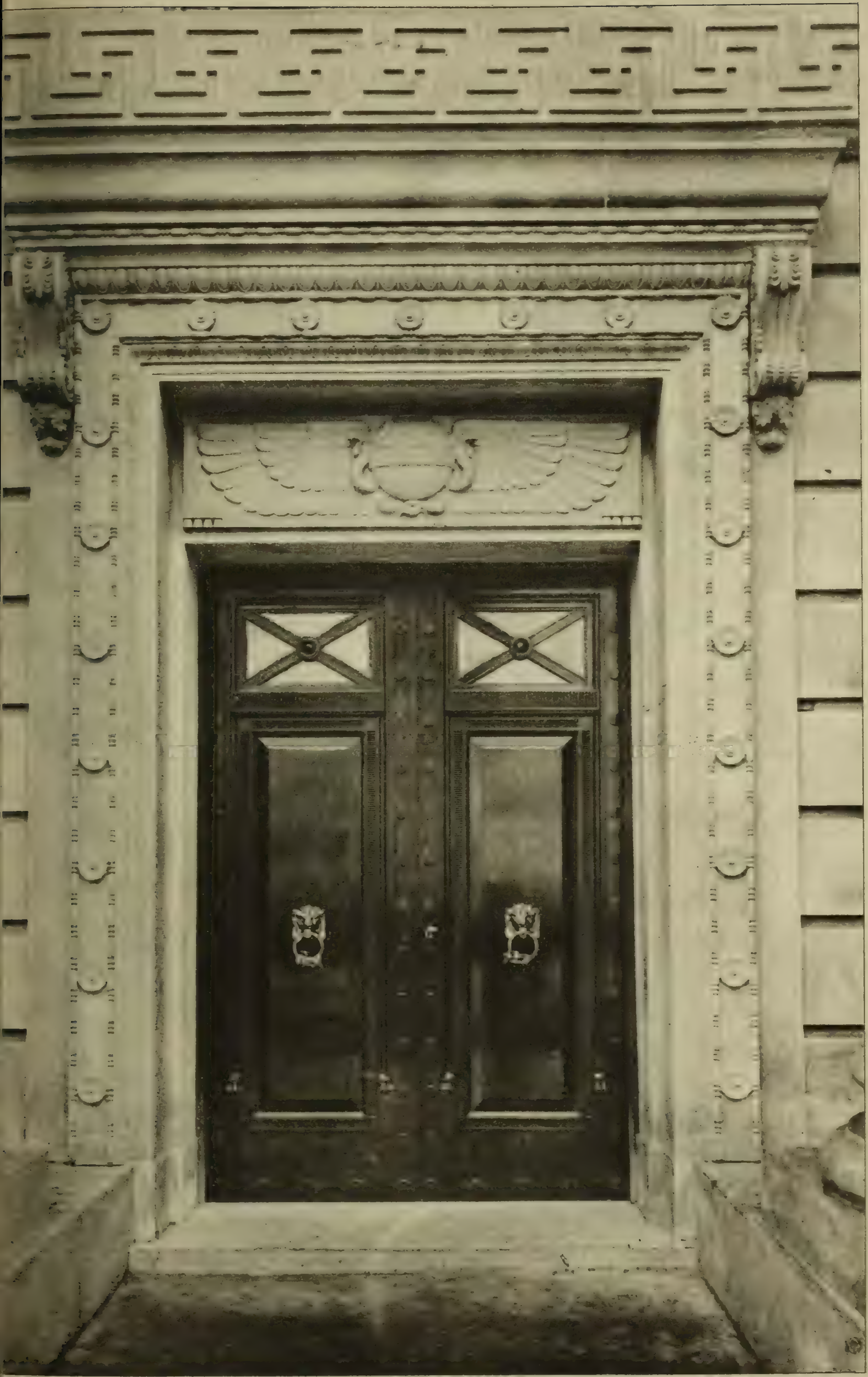

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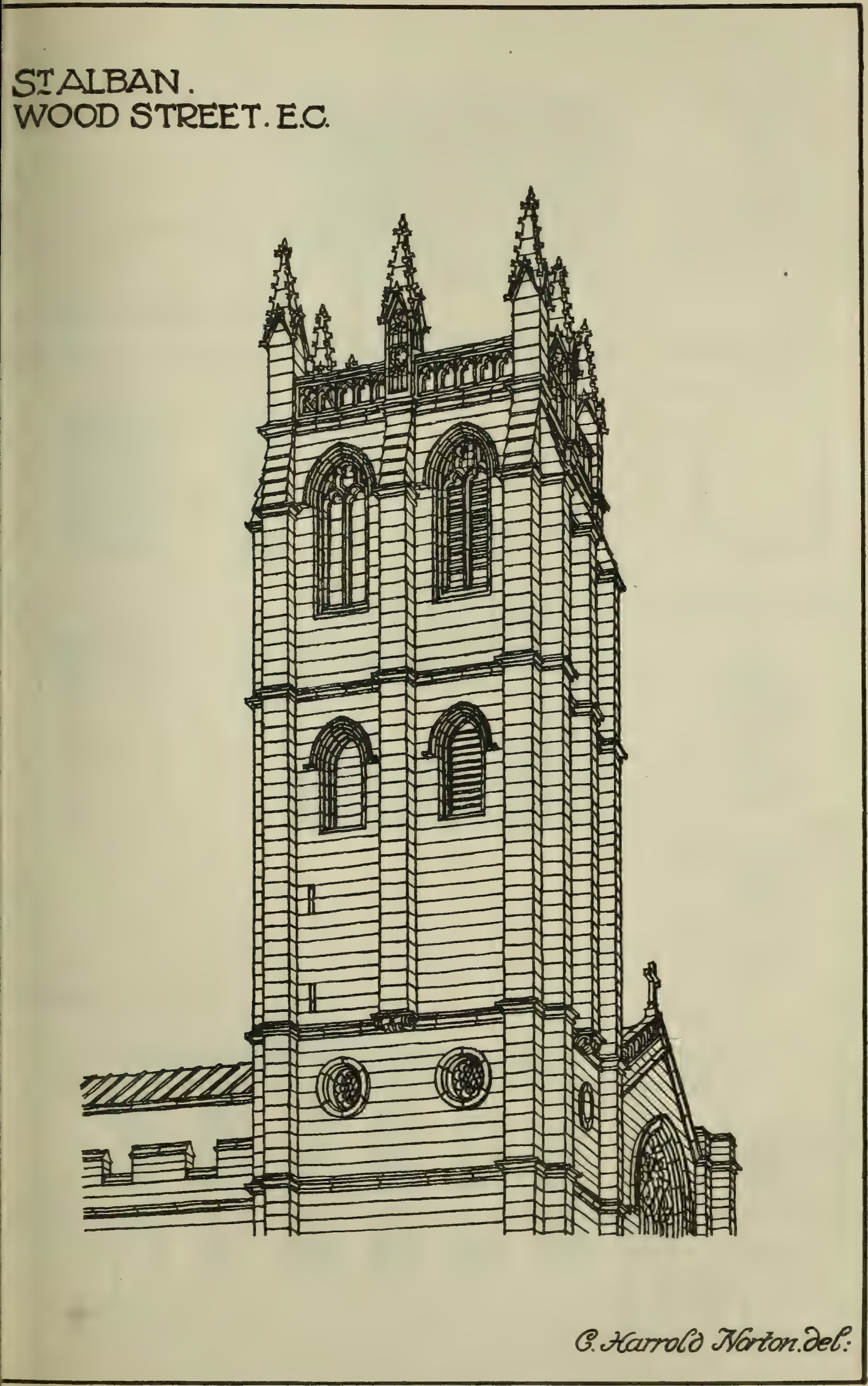
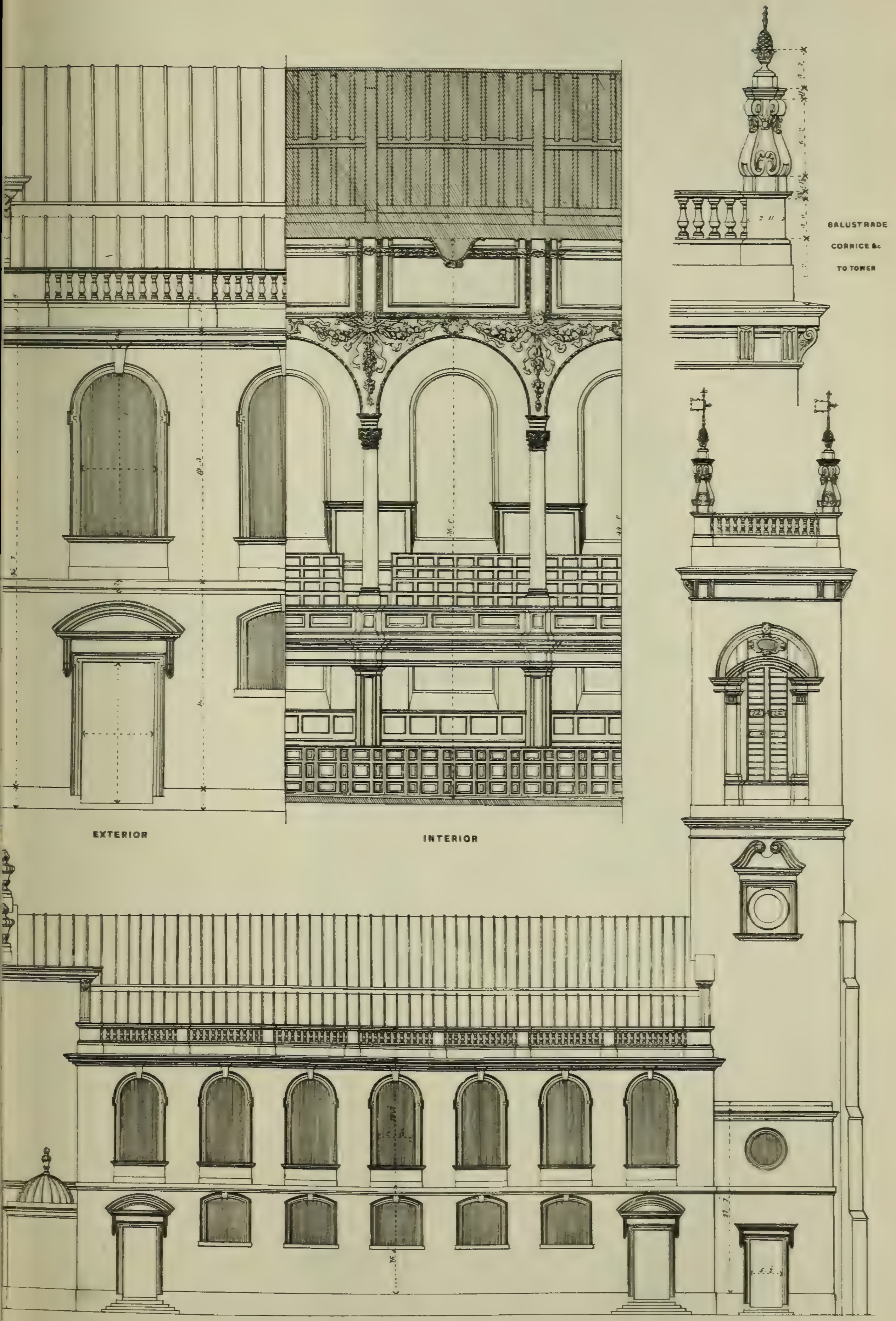
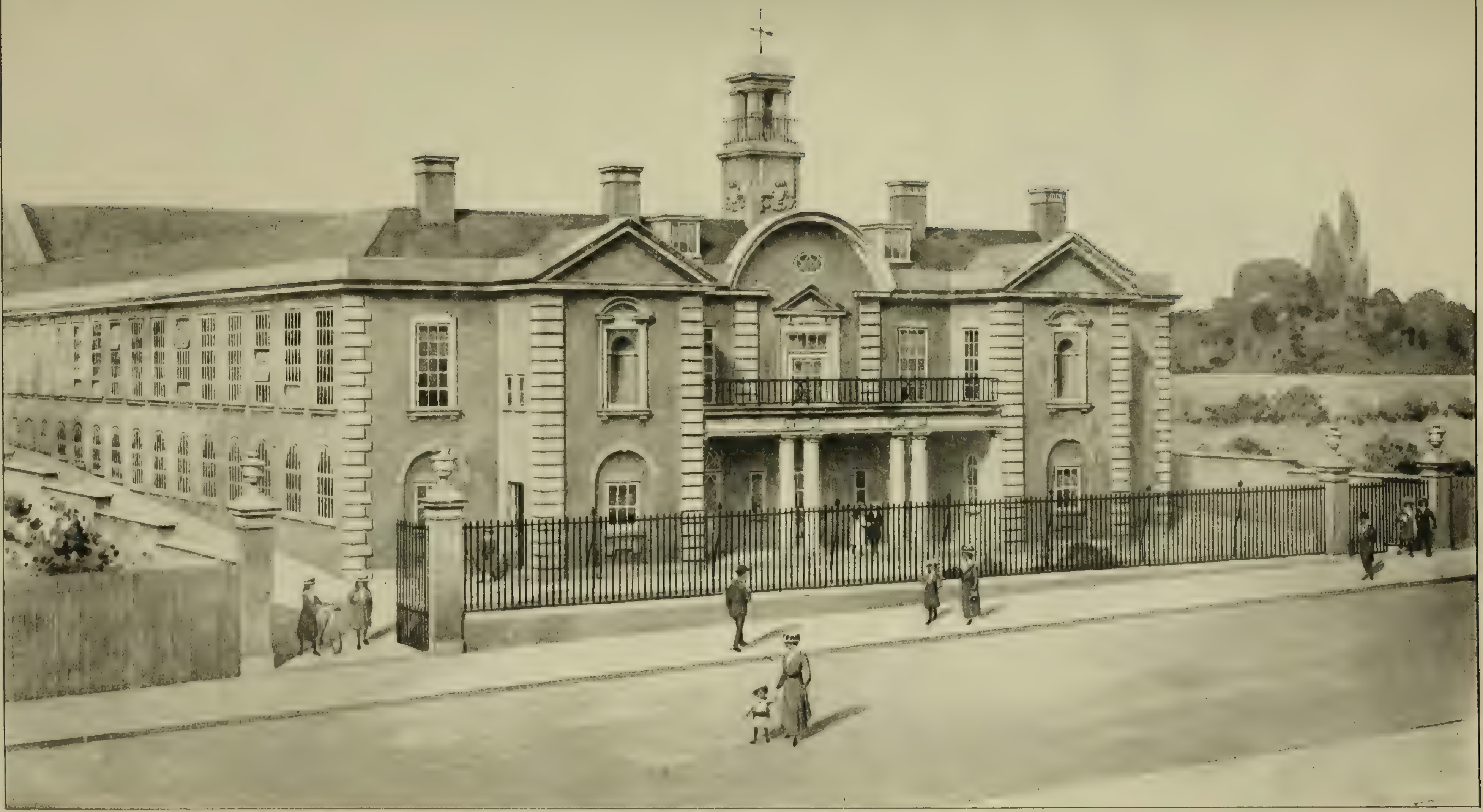

ST ALBAN.
WOOD STREET. E.C.
C. Harrold Norton. del:

TOWER OF ST. ALBAN, WOOD STREET.—RESTORED BY WREN.



WREN'S CHURCHES: ST. ANDREW'S, HOLBORN.



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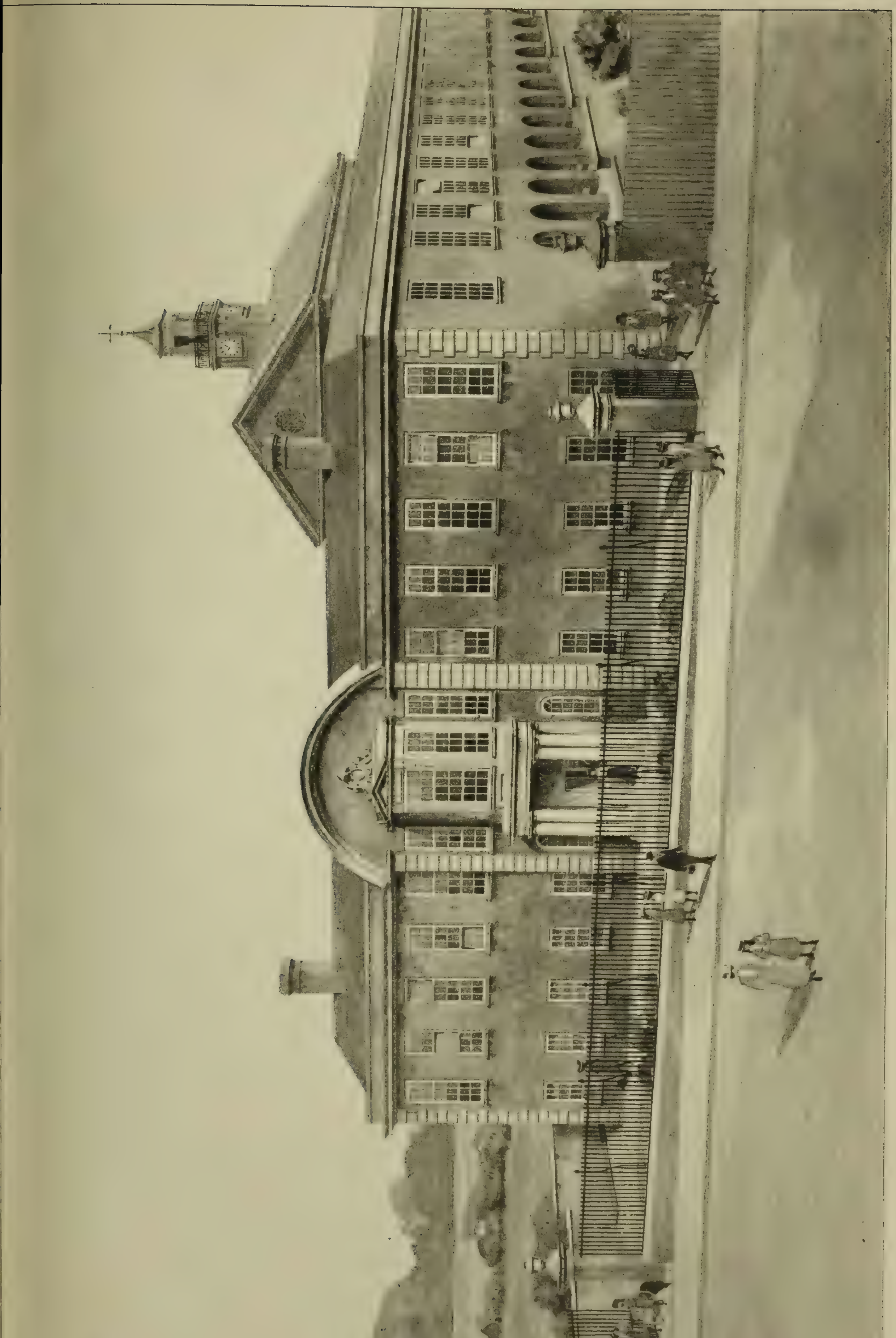


LUTON SECONDARY SCHOOL.—DESIGN BY MR. A. W. S. CROSS, F.R.I.B.A.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

CX.—No. 3819. APRIL 14, 1916.

HE ARCHITECTURAL EXPRESSION OF OUR TIMES.

THOUGH the battle of styles is now referred to as being dead, controversy as to the best means by which we can express ourselves is as much under discussion as ever, but the field of choice is by common consent more restricted was in the days when Gothic was considered a suitable n for municipal and domestic buildings. We have rd that some phase of the developed Renaissance in he earlier developments are eschewed, but which includes ec work, is suitable for all buildings. Now and then a ke Mr. March Phillipps disturbs our serenity and suggests e are following false lights, and Mr. Pennell considers e are neglecting the real architectural opportunities age because we do not realise the beauties of steel ction, which is the outcome of the engineering sion of the present time. We hope in our next issue to give an article by Mr. Pennell in which he s his point of view and illustrates it by drawings, e trust the challenge laid down will evoke an answer rchitects who consider his views as being heretical and d.

s always possible for the student of any branch of know- o lose sight of fundamental principles which are more s to those whose standpoint is a broader one, and, ch as no great æsthetic development is possible if who practise the arts have not the sympathy of their , it follows that we owe a debt of gratitude to all who eir views clearly before us, whether we regard their views neous or not. The most important point to be decided her outside indifference to art is due to want of education part of the public, or whether it is the result of the y on the part of the exponents of the arts to produce s distinguished by intrinsic merit. We have abundant e that architecture was both understood and iated by the people in mediæval times and continued so till a later date. In the eighteenth century it still ed an appeal to the educated classes, though it had to give joy and delight to all. Now the educated classes ided into a large and a smaller class, the first consisting se who accept buildings as necessities, but feel neither nor interest in them, and a smaller one who represent rvivors of that dignified and cultured class who thought ery gentleman should have some knowledge of archi- . Did the connoisseur of the eighteenth century, who cultured amateur, lead the architect into the quagmire quarianism and kill what he personally prized, and would reek Revival ever have been possible without the nti ?

think that the school of Elmes, Cockerell, Soane, and hitects of the Greek Revival represents an æsthetic which if persisted in would irrevocably alienate all outside thy and feeling for architectural art, however great the dual genius may be who expressed himself through the n of that phase, and we regard the efforts of some of our s of architecture to train students in a similar vogue with misgiving. The story of vigorous indigenous architecture country seems to us to end with Chambers and Gandon, may be that we should even have to go further back for rting-point from which it would be possible to produce ecture which would appeal to and be understood by the for that architecture which can only appeal to the ted must *per se* be an exotic. We may, it is true, be to accept the standpoint that no architecture can have ral appeal to the modern world, because the multiplication of intellectual interests and activities has no place for it in our lives and thoughts.

When we think what the lives of our forefathers were, the way in which they and their families were attached to localities for periods of hundreds of years, and the manner in which callings were followed by the members of the same family from generation to generation, and compare such conditions with those which now obtain, we are inclined to think that the changes which have occurred are the most powerful factor in obliterating interest in the arts.

Its effect on the problem has never received due weight in discussion, for while one section holds the view that the revival of architecture or, as many would prefer to put it, "building" can be brought about only by reverting to the methods of former times in which architecture was the result of the work of craftsmen, others refer us to later periods which were æsthetically great in spite of the decay of craftsmanship. But the diversity of our lives and specialisation force the architect more and more into the position of one who has to rely on his individual judgment in choosing or rejecting his medium, and the result is criticised by those who neither show intelligent or sustained interest nor feel that the arts are really necessary to their lives.

The very able address delivered by Mr. Leask Manson at Leicester, which we referred to last week, has a direct bearing on the question and raises a most difficult problem. The architecture of the past was largely the product of individual craftsmen; the architecture of to-day emanates practically in its entirety from the brain of the architect, while the workers employed in building act mechanically under direction. Can we, without abandoning the use of machinery and improved mechanical methods of production, find a place for the work of intelligent individual craftsmen, giving them some latitude and scope? If we can, the permeation of greater knowledge of æsthetic subjects among the workers must operate as a great revivifying power behind architecture, and will tend to save us from the pedantry of the student steeped in book-learning and dexterously pursuing his aims in spite of surrounding indifference. The period of change of method in working would be a difficult one for the architect, for while we admire Wren's work, which was the result of the combined skill of craftsmen directed by a master who supplied details which would be held totally inadequate now, the most gifted architects of to-day would feel they had done their work insufficiently if they left so much to others as was done two hundred years ago. Yet education in craftsmanship were useless if the architect gives the craftsman no opportunity of exercising his skill and showing his knowledge. To put the question plainly, is the architect willing to take the craftsman into partnership if he proves his capacity?

The problems to be solved seem to us to be, firstly, to determine whether we are working in a medium of style which mankind can be expected to feel interest in as he did in mediæval ages, or whether, as Mr. Pennell would urge, we are neglecting opportunities out of which art should rise as great as that we have admired in the past. If Mr. Pennell is right, we should leave the false gods at whose shrine we have worshipped, and out of the new conditions of life build up great architecture expressing modern life. If Mr. Pennell is wrong in his main contentions we may yet realise that we are in danger of taking the enthusiasm of studious architects too seriously, and may resolve to develop our own national Renaissance instead of straying into the beguiling snares set by the antiquarian and the dilettanti.

NOTES.

Land Taxation. The reply of the Government at the close of the debate in the House of Lords on land valuation can hardly be considered satisfactory. It amounted to this—that a system of taxation which from the very first was proved to be illusory, vexatious to the subject, and a serious cause of actual loss cannot be suspended even for the duration of the war, because it might arouse party feeling, and it was better to let sleeping dogs lie. Viscount Midleton quoted figures showing that in six years the yield of the taxes was £751,068 and the expenditure £3,268,080; but this does not represent the actual case, since this system of taxation involves the individual subject in expense which does not appear in the figures relating to the public expenditure. The war has knocked the whole bottom out of the system of valuation, if it ever had any bottom in it. The recent judgment delivered in the House of Lords in the case of the Attorney-General *v.* Foran again affords a commentary on the machinery under which the Act is enforced. The House held that Form IV. as relating to minerals did not comply with the requirements of the Act and was invalid, and Lord Wrenbury is reported as having said, "I regret that a form issued by a Government Department with a view to enforcing a liability under a taxing statute should assume a shape which I should not be surprised to find in a prospectus issued by a company promoter, but which is not worthy of the source from which the document comes." A taxing statute presumably is passed with the object of bringing in revenue, but the estimates based on this form of taxation have been proved erroneous from the very first, and, although no one at this juncture would wish to raise party strife, it seems extraordinary that any party of politicians can cling to a system of taxation which causes a serious loss in revenue and must continue to do so, especially since the war has upset any basis of value. The war might at least rid the nation of this incubus, which is far more damaging to some industries than any Zeppelin.

Athelhampton, Dorset. In our number of August 7, 1897, we published a plate illustration, from a drawing by Mr. Roland W. Paul, of Athelhampton Hall, near Dorchester, together with some sketches by him of the Hall open timber roof and of the Martin monuments in the neighbouring church of Puddletown. By Mr. A. C. de Lafontaine's direction the Hall—the finest example of Tudor domestic architecture in the county—and the estate of 140 acres will be shortly offered for sale. The name is derived from a traditionary palace of King Athelstan. The Martin family settled there *temp.* Henry III., and were the squires of the parish during 400 years. The Hall is distinguished for its oriel, gallery, oak panelling, old coloured glass, walled and terraced gardens, the ancient dovecot, and the yew hedges. Of the Martins are several monuments and memorials in the chapel of St. Mary Magdalen, being the south transept, or rather aisle, of Puddletown Church. One monument is a decorated altar tomb with an alabaster effigy in armour of about 1400; that of Sir Nicholas Martin records his death in 1595. The chapel appertains to the estate. Puddletown Church is the village church of Mr. Hardy's "Far from the Madding Crowd."

The Deduction of Income Tax from Rent. Some months ago a very eminent legal luminary asserted that the right conferred upon tenants of deducting income tax from rent led to a loss to the Exchequer, as in many cases the amount so deducted was never paid into the Treasury. This statement was questioned at the time, as it was pointed out that under sect. 40 of the Property Act, 1853, the tenant was only entitled to deduct the sum actually paid. This point has now come before the Courts in the case Barnes *v.* Kyffin (the *Times*, March 27). The case is very shortly reported, but it appears that the plaintiff was suing to recover possession of twelve houses and for two quarters' rent on breach of covenant to pay the rent. The defendant had tendered the rent less income tax, which at that time had not been paid, the demand note having not been received until nearly three months after the rent became due. It was contended on behalf of the defendant that the provisions in sect. 40 of the Act of 1853, which made the right to deduction depend upon actual payment, had been repealed by sect. 15 of 27 Vic. c. 18 (1864), which enables a deduction to be made at the several rates in force during the period through which the rent is accruing due. The Court considered the point not even arguable, and only granted relief from forfeiture on payment of the full rent and costs and expenses. We may point out that the provision contained in the Act of 1864 is very important in these days when the rate of income tax is varied during the year, as under the Act of 1853 the deduction could only be made of the rate of tax in force "at the time when" the rent was payable, but it in no way affects the necessity of making payment of the tax before deduction can be made, and tenants should note this point.

Dublin Housing. The Local Government Board (Ireland) has refu
to sanction a housing scheme brought forward
the Dublin Town Council on the ground that
proposed area, which is in Spitalfields, is surroun
by insanitary property which ought to be included, also more provis
should be made for open spaces. A number of members of
Council proceeded to object in a truly Hibernian manner, Alderm
Kelly remarking that the Board were now the dictators to the (
Council, and he thought they had an opportunity of fighting wh
should not be missed. The Council's Law Agent gently remin
the Council that they would be fighting "with hands tied beh
their backs." Alderman Kelly was anxious that the £8,000 wh
it was proposed to spend on the scheme should be made applica
to another estate, but was told that money could not be
on the rates for an indefinite scheme. Alderman Kelly subsequen
drew attention to the disgraceful inequality of rating under wh
Trinity College with the finest site in the city only paid £259 and
Royal College of Surgeons £50, and asked whether such a state
things could not be changed. The Law Agent replied that
revision could only be effected if the law was changed, and he is
report on whether it is possible to obtain a "change in the la
We imagine this is not the first time that Irishmen have wante
change in the law, and we doubt if a Dublin Parliament legisla
for them whether the new *status quo* would satisfy them better th
the present one!

Columbus: Marble Statue for U.S. Customs House, New Yor

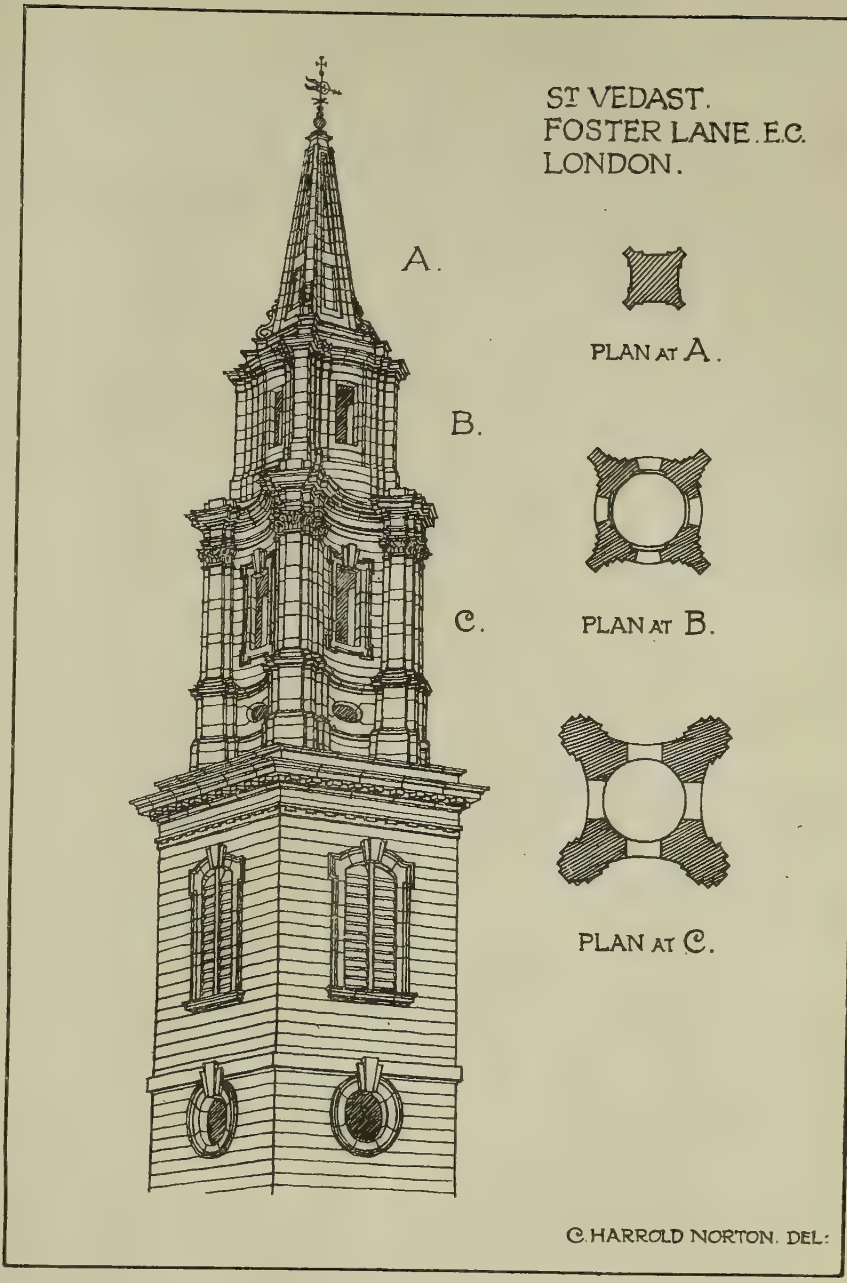
[This is a good example of the work of Mr. Augustus Lukeman who has be
employed to carry out the sculptural adjuncts of several importa
American buildings recently erected.]

HE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. XXVI.—St. Vedast, Foster-Lane.

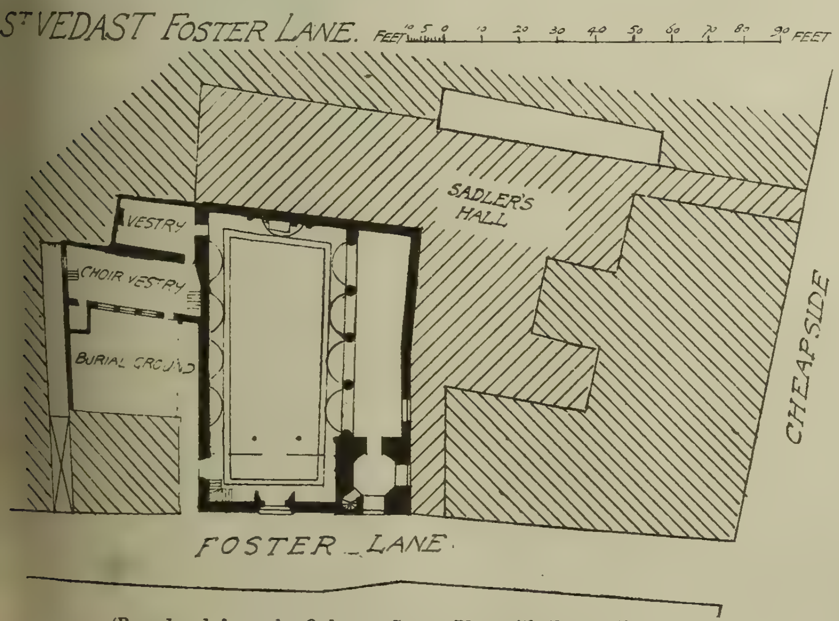
St. Vedast is said to be dedicated to a hop of Arras who lived in the sixth century, l was formerly known as St. Fausters or sters. It was severely damaged in the Fire, l rebuilt on the old walls by Wren; but the cient steeple was left standing until 1694, en it was pulled down and replaced by what y be regarded as being one of the most fect of all the great architect's designs. no other case has so much effect been ained from alternating stages of concave and vex curves, and Wren's mastery of line and ss is made manifest by the beauty of the nposition. The interior, though very simple, pleasing, the coved ceiling, into which clerestory windows break, being well- portioned, and the arcade between nave l aisle adding a note of interest to an remely simple design. The woodwork is d, and there are a number of interesting and l-designed monuments along the southern l. Both the pulpit and the altar are pleasing, the church as a whole is harmonious and le spoilt by incongruous modern additions ept for some deplorable glass.

ith the parish of St. Vedast are united se of St. Matthew, Friday-street, demolished 1881, and St. Peter, West Cheap, a church ch stood in Wood-street and was not uilt after the Fire. To St. Vedast was also ted the parish of St. Michael le Querne, a rch situated at the east end of Paternoster- , and was not rebuilt after the Fire. St. ast is one of the thirteen "Peculiars" of Archbishop of Canterbury.



No. XXVII.—St. James, Piccadilly.

he church of St. James, Piccadilly, was secrated in 1684, its parish being separated n that of St. Martin-in-the-Fields. It was of the churches in which Wren took most le, and when in 1704 an Act was passed promote the building of further churches utlying London the interior of St. James quoted in Wren's report as an example to followed. The exterior, though dignified simple, is somewhat wanting in interest, is more reminiscent of the earlier Georgian iod than most of Wren's work; the interior listinguished for its good proportions and l-considered detail. It is very similar ts general lines to St. Clement Danes, but, le the chancel lacks the beauty given by the osition of the plan of St. Clement Danes, the il and proportions are more refined and sing. The carving and decoration through- , which are known to be by Grinling Gibbons, show that his work had a quality which his followers never fully succeeded in attaining to. The church is the only one of Wren's erected in the London district outside the limits of the City of London.



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

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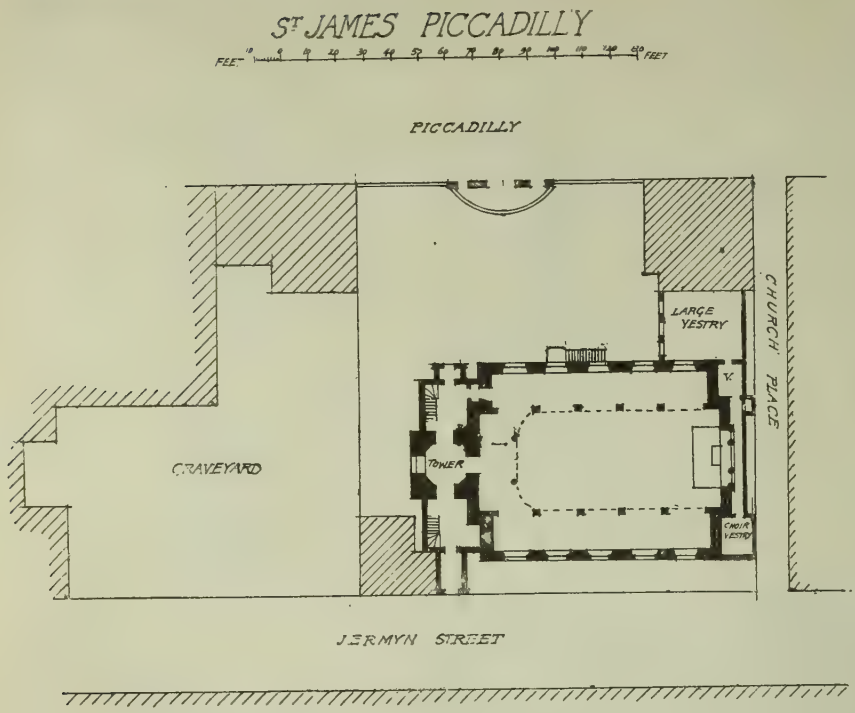
THE INSTITUTION OF CIVIL ENGINEERS.

At a meeting of the Institution of Civil Engineers on the 4th inst. a paper on "The Present Conditions of Arterial Drainage in some English Rivers" was read by Mr. Richard F. Grantham, M.Inst.C.E. The subject of the paper was suggested by a reference, in the President's Inaugural Address in November, 1915, to the want of a single controlling authority or conservancy board over rivers whose valleys are liable at times to extensive floods. In 1913 the author and Mr. C. Bidwell were appointed by the Board of Agriculture and Fisheries as Special Commissioners to inquire into and report upon the conditions affecting arterial drainage in certain river valleys on the east side of England, and had opportunities of observing many of the engineering features in the river systems. The rivers examined were—in the East Norfolk district, the Bure, the Yare, and the Waveney; in the Fen and March districts in Cambridgeshire, Norfolk, and South Lincolnshire, the Great Ouse, the Welland, and the Witham; as well as some others in different parts of the country.



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.) (*See page* 277.)

SURVEYING, PAST AND PRESENT.

The second Fothergill Lecture by Mr. E. A. Reeves, F.R.A.S., F.R.G.S., was delivered on April 3 at the Royal Society of Arts.

The lecturer gave some interesting details of the Ordnance Survey, in which it is noticeable that the Indian Survey has always kept well ahead of the remainder. The first necessity for maps in Great Britain arose from the requirements of the campaign in Scotland against the Jacobites in 1745, and that led to a proposal for a general survey; but the first base line, which was on Hounslow Heath, was not laid until early in the nineteenth century. The Loch Foyle base was established in 1827, and that on Salisbury Plain in 1848. Speaking of the world generally, until 1860 vast areas in the centres of continents were unmapped; indeed only one-thirtieth of the whole land areas of the globe were then accurately surveyed. Now the proportion was about one-seventh. At that time about one-half of the land had not even been roughly surveyed (as by route traverses), but now the unknown area was only one-seventh. Had there not been important military operations in various places, involving accurate surveys—such as those in Afghanistan in 1884, by Captain Ryder, and in South Africa at various times, and also prospecting surveys for commercial purposes and those made by conscientious missionaries such as Moffat and Livingstone—the unknown areas would have been much greater.

The principal base lines in Europe, Asia, and Africa were shown, including that made by Sir David Gill from the Cape to Egypt. At the International Geodetic Conference in 1909 steps were proposed to connect these base lines with one another. This involves great expense, and would take a long time to achieve, but was thought to be quite feasible. The original maps made by Livingstone in 1855, when he explored the country from Bechuanaland to Angola, and later the Zambesi River, were shown; and also those of Speke, Keith Johnston, and Joseph Thompson.

Of recent achievements, those of Peterkin in 1912, of the Workman Expedition, and of Dr. Filipi, who surveyed from India to Yarkand and Kashgar, and of Clementi from Kashgar to Kowlun, were among the most remarkable. Latterly differences of longitude were obtained by simultaneous observations of time communicated by wireless telegraphy

The difficulties of Polar surveys were described. They are not only climatic but the compass is unreliable, and, as it is only safe to travel by daylight, astronomical observations can only be taken by the sun, which is usually so low that refraction disturbs all the calculations. Allowing for all this, it was remarkable that Capt. Scott's observations of the South Pole only differed from those taken by Capt. Amundsen by half a mile.

An account of the work of the Royal Geographical Society showed that it had lent instruments to 331 expeditions and financially assisted others to the extent of nearly £40,000, and given valuable instruction to 730 surveyors from all parts, and also to special classes sent by the Colonial Office. The Society's Special Survey Diploma had been given so far only to seventy-five students, but the lecturer, who is now responsible for the scheme of instruction, expected great activity after the war in defining new boundaries and opening up many countries hitherto closed to civilisation, and hoped that those fitted for such work would rise to the occasion.

In his third lecture, delivered on the 10th inst., Mr. Reeves described the various instruments used by geographical surveyors. The advent of the telescope, the vernier, and the micrometer theodolite had revolutionised surveying completely; so that now errors were reduced on the average to about 1 in. to a mile, as in the Ordnance Survey absolute accuracy was impossible, as Nature defeated it at every turn—as by the effect of temperature on the instruments, the refraction of light rays by the atmosphere, and even the deflection of the plumb-line from true verticality by unequal gravity. The best that can be done is to try to make the errors balance one another.

Dealing with the theodolite, Mr. Reeves laid down certain essential features—the vertical and horizontal circles should be complete circles, the telescope must be capable of being reversed, and the level must be on the micrometer arm and not on the telescope for all vertical measuring instruments. Heavy instruments cannot be taken on large expeditions, but a good workable 3-in. instrument had been made, and this was used by Shackleton on his Polar work. For measuring lengths tapes made of an alloy of steel and nickel were used. These only gave an error of one in a million for each degree centigrade, as against 1 in 204 with a steel tape.

The tacheometer for rapid measurements was not of much value beyond 600-ft. lengths. The plane table, first brought into general use by Americans, has proved most useful f
topographical work, and a full description of it
use could be found in the *Journal* of the R.G.
for May, 1915. To overcome the effect
damp on the board the paper should be mounte
on aluminium.

For measuring heights a mercurial baromete
was good, but very breakable, and an anero
most unreliable. The clinometer, as improve
by Mr. Reeves himself, gave fairly accura
means for determining heights.

Within proper limits the photo-theodoli
was a very useful instrument, especially i
mountainous country—photographs were take
at each end of the base line and angles re
of the different points.

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THE LOCAL GOVERNMEN BOARD'S REPORT O HOUSING AND TOW PLANNING.

We give the following extracts from t
Local Government Board's Report on Housi
and Town Planning for 1914-15:—

"Sect. 54 (2) of the Act of 1909 provid
that we (1) may authorise a local authori
to prepare a town-planning scheme with ref
ence to any land within or in the neighbourho
of their area if the authority satisfy us th
there is a *primâ facie* case for making such
scheme, or (2) may authorise a local authori
to adopt with or without any modificatio
any such scheme proposed by all or any of t
owners of any land with respect to which t
local authority might themselves have be
authorised to prepare a scheme. During t
year ended March 31, 1915, the period

[Photo.: Geo. Trotma

St. Vedast, Foster-Lane. (*See page* 27

hich this Report relates, we gave authority
r the preparation of 49 schemes by the follow-
40 local authorities in respect of areas con-
ining more than 77,000 acres of land,
mely :—

rporations (19) (27 schemes).
Barrow-in-Furness, Birkenhead, Great Yar-
outh, Huddersfield (3 areas), Kingston-upon-
ull, Leeds (2 areas), Lincoln, Manchester
areas), Neath, Nelson, Newcastle-upon-Tyne,
wport (Mon.) (2 areas), Rochdale, Southend-
Sea, Tynemouth, Wallasey (2 areas),
allsend, Wrexham, York.

ban district councils (15) (15 schemes).
Barnet, Beckenham, Edmonton, Esher and
Dittons, Grays Thurrock, Harrow-on-the-
ill, Hendon, Heston and Isleworth, Merton
d Morden, Neston and Parkgate, Oldbury,
ley, Ruislip-Northwood, Sidmouth, Surbiton.

ural district councils (6) (7 schemes).
Doncaster, Halesowen, Hendon, Honiton,
therham (2 areas), Wrexham.

Applications under Consideration.

In addition to the cases above mentioned we
under our consideration at March 31, 1915,
applications by 12 local authorities for
thority to prepare schemes in respect of
as comprising about 25,000 acres of land.

rporations (7) (8 schemes).
Birmingham (8,400 acres), Colne (877 acres),
oydon (812 acres), Mansfield (3,318 acres),
wport (Mon.) (784 acres), Nottingham
15 acres), Southend-on-Sea (two areas of
01 and 62 acres).

ban district councils (4) (4 schemes).
Beckenham (203 acres), Hale (1,010 acres),
ttle Hulton 1,699 acres), Longbenton (2,785
res).

ural district councils (1) (1 scheme).
Wrexham (1,651 acres).

In some of these cases authority to prepare
hemes has been given since March 31, 1915.

ther Cases in which Notice has been Given.

Before an application can be made for
thority to prepare a scheme or to adopt a
heme prepared by owners certain procedure
der the Town-Planning Procedure Regulations
ust be taken, including the giving of notices
persons interested. We had information
owing that in addition to the cases above
entioned preliminary notices had been given
der the Regulations by the following 32
cal authorities with a view to application
ing made to us for authority to prepare
hemes, viz. :—

rporations (13).
Chesterfield, Chorley, Coventry, Derby,
eeds,* Middlesbrough, Ramsgate, Reigate,
lford,* Sheffield,* Shrewsbury, South Shields,*
est Hartlepool.*

rban district councils (16).
Acton, Barnes, Barry, Bentley-with-Arksey,
redbury and Romiley,* Cheadle and Gatley,
iswick, Finchley, Hayes, Hendon, Seaton
elaval,* Southgate, Wembley, Whitley and
onkseaton,* Willesden and Wood Green.

ural district councils (3).
Eastry, Grimsby,* and Warrington.

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MINERAL RESOURCES OF GREAT BRITAIN.

The Board of Agriculture and Fisheries
sires to give notice of the publication of
lume 4 of the above named Special Reports,
hich have been prepared by the Director of the
eological Survey in response to numerous
quiries that have arisen through the condi-
ons brought about by the war. Volumes 1, 2,
d 3 are already published, and this, the fourth
the series, deals with the properties, sources,
d uses of fluorspar and gives details of all
orkings in Britain. Price 9d. Copies may
obtained through any bookseller, from
essrs. T. Fisher Unwin, Ltd., 1, Adelphi-
rrace, London, W.C., or from the Director
eneral, Ordnance Survey Office, Southampton.

THE ARCHITECTS' BENEVOLENT SOCIETY.

THE annual general meeting of the Architects' Benevolent Society was held on the 11th inst. in the rooms of the Royal Institute of British Architects, 9, Conduit-street, W.

The President, Mr. Ernest Newton, A.R.A., occupied the chair, and among those present were Messrs. Lewis Solomon, W. H. White, E. Greenop, O. C. Hills, G. Scamell, C. H. Löhr, Herbert Shepherd, E. C. P. Monson, Percy Tubbs, Andrew T. Taylor, R. Roumieu, Hy. Lovegrove, Hilton Nash, and P. Currey.

The Hon. Secretary (Mr. Percivall Currey) read the annual Report of the Council as follows :—

"The Council of the Architects' Benevolent Society, in submitting their sixty-sixth annual Report, have to state that the past year has been one of great activity. Owing to the war a considerable amount of work has been undertaken, both directly and indirectly, by the Society in connection with the relief of architects in distress.

The Architects' War Committee, which was established soon after the outbreak of hostilities, collected in response to an appeal made by the President funds which they have placed from time to time in the hands of the Architects' Benevolent Society for administration. Since the last Report the Civic Survey Committee, having been successful in their application to the Government Committee on the Prevention and Relief of Distress, the scheme of Civic Surveys for the areas of Greater London, South Lancashire, and South Yorkshire was started in July. Before the end of the year two grants of £1,000 each were made by the Government Committee, and were administered by the Society on behalf of the Civic Surveys for the payment of salaries, etc. Your Council have further worked in close sympathy with the Professional Classes War Relief Council, with the Professional Employment Committee, and the London Society. In consequence of the assistance given by the Government Committee a large number of men have been employed regularly, which has no doubt relieved the Society of burdens it would otherwise have been unable to bear.

The funds placed at the disposal of the Society by the Architects' War Committee have made it possible to deal sympathetically with other applications which have been made in direct consequence of the stoppage of architectural work. . . .

So far as the special work in which your Society is concerned, the relief of pre-war cases and of widows and orphans has been continued. During the year eighty such applications have been responded to, an amount of £701 10s. having been expended in grants. A further amount of £261 has been paid to pensioners of the Society, making the total amount expended in relief in this way £962 10s. Two pensioners have died within the last year, and two other annuitants have been elected and are receiving pensions.

The funds of the Society, notwithstanding the many appeals that have been made in all directions, have been fairly well maintained, the amount received in subscriptions being £636 19s., and in donations and legacies £1,615 3s. 7d. The dividends on investments amounted to £613 12s. 2d. A further sum of £113 1s. was also recovered from the Income Tax authorities. The total receipts of the Society, therefore, apart from the special funds placed at their disposal by other bodies, was £2,968 15s. 9d.

There is a slight diminution in subscriptions, and it is hoped in the coming year that many members who have given donations instead will revert to their former practice. Contributors may be reminded that subscriptions are credited to income, while donations are placed to the capital account, to be subsequently invested in various trust securities.

The capital account was increased £1,000 by the legacy of Mrs. Arthur Cates and by the sum of £343 15s. 1d. from the executors of the late Mr. William Glover's estate, which has now been wound up, and from which there will in course of time accrue to the Society, jointly with the Northern Architectural Association, a considerable sum as residuary legatees. Towards the end of the year the Council were also informed by the executors of the late Mr. C. Bertram Bulmer that the testator had bequeathed a sum of money under certain conditions by which the Society will ultimately benefit. Donations have also been received during the year as follows :—Mr. George Edwards, £25; Mr. Ernest Newton, £10 10s. ; Mr. Arthur Sykes, £10 10s. ; Sir William Emerson, £10 ; Mr. Horace Porter, £10 10s. ; Mr. John Bryce, £10 10s. ; Mr. Archibald M. Dunn, £10 ; Mr. Francis E. P. Edwards, £10 10s. ; Mr. F. B. Dunkerley, £10 10s. ; Mr. Hervey R. Sayer, £10 10s. ; Mrs. Flint Clarkson, £10 10s. ; Mr. R. M. Lucas, £10 10s. ; Mr. W. Campbell Jones, £5 5s. ; Mr. Henry Lovegrove, £5 5s. ; Mr. H. Chatfeild Clarke, £5 5s. ; Mr. W. Hilton Nash, £5 5s. ; Mr. Percivall Currey, £5 5s. ; the Tilers' and Bricklayers' Company, £5 5s. ; Mr. Sydney Perks, £5 5s. ; the Sheffield Society of Architects, £5 5s. ; Messrs. W. and E. Hunt, £5 5s. ; Mr. Guy Dawber, £5 ; Mr. T. R. Bridson, £5 ; Mr. A. Saxon Snell, £5 ; Mr. Henry Beswick, £5 ; and various smaller sums.

To the Special War Fund of the Society the following donations have been contributed :—Mr. E. L. Lutyens, £31 10s. ; Sir Aston Webb, £25 ; Sir Ernest George, £25 ; Mr. W. D. Caröe, £10 10s. ; Mr. Reginald Blomfield, £5 5s.

In the summer of last year an exhibition of paintings, etchings, and drawings was held by members of the Imperial Arts League and members of the Institute. The proceeds, in whole or part, were, at the option of the exhibitors, handed over to the Architects' Benevolent Society's War Fund. The Society thus benefited to the extent of £173 16s. 7d. The Council desire to express their grateful acknowledgment both to the exhibitors and promoters of the exhibition.

During the year purchase has been made out of the capital account of £1,300 War Loan Stock, at a cost of £1,230 1s. 9d. . . .

The Council have to announce with great regret the death of their senior Vice-President, Mr. H. L. Florence, and Mr. J. Macvicar Anderson, one of the Trustees and at various times a member of the Council. They also regret to announce the death of Mr. C. Bertram Bulmer.

The following, being the five senior members, retire by rotation from the Council : — Mr. Henry Lovegrove, Mr. William Grellier, Mr. C. R. Baker King, Mr. Andrew T. Taylor, Mr. W. D. Caröe. To fill the vacancies caused by these retirements the Council have the pleasure to nominate Sir John J. Burnet, Mr. William Woodward, Mr. Arthur Ashbridge, Mr. A. Saxon Snell, and Mr. Lewis Solomon." . . .

The President, in moving the adoption of the Report, said on account of the war a very great strain is put on the funds collected for meeting cases, and they are very numerous, of those who have suddenly found themselves with very little income in the present.

The motion was adopted.

The Council for the session 1916-17 were elected as follows :—

President—The President R.I.B.A., Mr. Ernest Newton, A.R.A.

Vice-President—Mr. R. St. Aubyn Roumieu.

Ordinary Members—Messrs. Basil Champneys, C. Stanley Peach, W. Campbell Jones, Percy B. Tubbs, Edward Greenop, Lewis Solomon, Arthur Ashbridge, H. Chatfeild Clarke, Horace Porter, Walter L. Spiers, W. Henry White, Sir John J. Burnet, A. Saxon Snell, Wm. Woodward, E. C. P. Monson.

On the motion of Mr. Roumieu, seconded by Mr. Greenop, Mr. Hilton Nash was thanked for his past services and re-elected as Hon. Treasurer. Mr. Scamell moved a vote of thanks to Mr. Percivall Currey and his re-election as Hon. Secretary.

On the motion of Mr. Percy Tubbs, seconded by Mr. Hilton Nash, Mr. Herbert Shepherd and Mr. Osborn C. Hills were thanked for their past services and re-elected as auditors for the ensuing year.

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* In these cases applications had at beginning of
ptember, 1915, been made for authority to prepare
emes.

GENERAL NEWS.

Good Friday Week.

In consequence of the Easter holidays we go to press a day earlier than usual next week, the *Builder* being published on Thursday. All communications must reach the Editor by first post on Tuesday morning.

The People's Housing.

The Nottingham and District Property Owners' and Ratepayers' Association, Burton Buildings, Parliament-street, Nottingham, have sent us a pamphlet entitled "The People's Housing," dealing with the effect of the Finance (1909-10) Act, 1910, on the building of cottages, by Mr. A. W. Shelton, F.A.I.

The Late Mr. Harry Hems.

Mr. Harry Hems, of Fairpark, Longbrook-street, Exeter, ecclesiastical art worker, who died January 5, left estate valued at £13,027 gross, with net personalty £10,083. In his will he expressed the desire:—"That the 'Chicago' rood beam shall be placed in the chancel of St. Sidwell's Church, and the following inscription placed thereon:—'This Chicago beam was made by Harry Hems, sculptor, of this parish, who lived and flourished here, 1869-19—, and died ————, having received the highest attainable honours awarded at the World's Fair, Chicago, 1893, and the gold medal at the International Exhibition, Antwerp, the following year for the work.'"

The Architectural Association.

An ordinary general meeting of the Architectural Association was held at No. 37, Great Smith-street, Westminister, S.W., on Monday, April 3, Mr. H. Austen Hall (President) in the chair. The President proposed that a vote of condolence be passed to the relatives of the following members, who had fallen in the war since the last meeting of the Association:—Messrs. H. E. J. Davidge, Maurice Day, and Henry Wood. The motion was carried in silence.—Two nominations were announced, and the following gentleman elected a member—Mr. C. J. Kennedy, 49a, Longridge-road, Earl's Court, S.W. The following reinstatement was announced:—Mr. A. K. Chaudhuri, 118, Elgin-crescent, Holland Park, W.—The President read the Council's nominations for the House List for the ensuing session, and stated that formal nominations would take place at the next ordinary general meeting, which would be held on May 1, when it would be competent for any two members to nominate further candidates.—It was announced that the late Mr. H. L. Florence had bequeathed to the Architectural Association the sum of £1,000 for the purposes of the Association and a further £1,000 to found and provide an annual prize to be described by or associated with Mr. Florence's name.

London 43 V.A.D. (Architectural Association).

A section of this detachment (which is composed very largely of architects), under the command of Commandant A. W. Coffin, provided two fully-equipped stretcher squads at the Michie Hospital, Queen's Gate, on March 15, on the occasion of the opening of that Institution by H.M. Queen Alexandra. During the afternoon Lord Reading inspected the hospital, and spoke in appreciative terms of the services which are being rendered throughout the country by the V.A.D.'s working under the British Red Cross Society. Members of the detachment afterwards had an opportunity of inspecting the hospital, which is fitted with the latest appliances in the way of baths, etc. Those members of the stretcher squads who are architects were in particular able to appreciate the successful manner in which the hon. architect to the hospital, Quartermaster Victor Wilkins, M.S.A., had overcome the difficulties incidental to adapting a mansion of this description for the purposes for which it was never originally intended, viz., the reception and treatment of something like fifty wounded soldiers. With the opening of the Michie Hospital, the Architects V.A.D. will be, in addition to its other duties, providing orderlies for five V.A.D. Hospitals in the Westminster Division.

Building Materials and Furnishings, Australia.

A manufacturer and importer in Sydney desires to get into touch with United Kingdom manufacturers of building materials and furnishings. Communications in this connection should be addressed to the Official Secretary, Office of the High Commissioner in London for Australia, 72, Victoria-street, S.W.

Water-Colours at Manchester.

With the object of helping artists at the present time the Governors of the Whitworth Institute, Manchester, have opened an exhibition of water-colours by living artists to take the place of that abandoned by the Manchester City Art Gallery. It will remain open for seven weeks.

Memorial to the Late Lord Londonderry.

The memorial to the late Marquess of Londonderry subscribed for by the parishioners of Seaham Harbour is to be unveiled on April 15 in St. John's Church. The memorial is a tablet of white Carrara marble, with a carved foliated border inlaid with Sienna marble. It is surrounded by a moulded frame of polished Irish green marble, and surmounted by the coat of arms of the late Peer emblazoned in heraldic colours. It has been executed from the design of Mr. W. H. Wood, of Newcastle and Durham, by Messrs. Gaffin, London.

Progress at Letchworth.

From the annual Report, 1915, of the Garden Cities and Town-Planning Association we take the following:—It is satisfactory to record that the year has marked continuous advance at Letchworth, an increase of over 2,000 inhabitants being recorded in the last Report of First Garden City, Ltd. A large number of these are dependent upon a new Belgian firm of motor-car manufacturers who were previously in business at Antwerp. The present population is now estimated at 12,000 people. The satisfactory condition of the estate is evidenced by the increasing improvement of the financial condition, the net profit for the year being £5,822.

Rebuilding Belgium.

In their annual Report for 1915 the Garden Cities and Town-Planning Association (No. 3, Gray's Inn-place, W.C.) reports that the International Garden Cities and Town-Planning Association has effected a great deal of useful work, particularly in regard to Belgium. In conjunction with the Garden Cities and Town-Planning Association and with the approval of the British Government and the Belgian Government a Conference of Belgian architects was held at the Guildhall of London in February, 1915, for the purpose of studying the question of the rebuilding of Belgium on garden city and town-planning lines at the end of the war. Proceedings, which were wholly in French, were followed by some three hundred Belgian professional men, and representatives were also present from the various professional bodies in this country, from the architectural societies in Holland and France, and also from the French Housing and Credit Societies. Resolutions were unanimously passed, including the following:—

The Conference is in agreement with the general principles of the Garden Cities and Town-Planning Association, and purposes—

That a general plan of Belgium be drawn up, including

(*a*) A plan of the roads, railways, and canals;
(*b*) A plan of the towns partially destroyed;
(*c*) A plan of the towns and villages entirely destroyed.

That the application of the existing laws and the form of the laws to be eventually introduced should be such as to constitute a compulsory minimum standard, and that these laws should be so elastic as to be adaptable to the æsthetic and hygienic necessities as they may be clearly defined.

Any reconstruction whatever of the whole or part of a town which has been destroyed should be preceded by the drawing of a plan of lay-out, of extension and of improvement, which should determine the arrangement and the disposition of the different quarters, should fix the direction and width of the streets, the situation and the area of the squares, public gardens, parks, etc.

British Industries Fair, 1916.

The Board of Trade have now decided to hol the British Industries Fair in London next yea from Monday, February 26, to Friday, March inclusive. Full particulars regarding the Fa and the building in which it is to be held wi be announced in due course.

War Hospital.

Bath War Hospital, at Combe-park, wit the Lansdowne Cricket Club ground for recrea tion, is now open for patients. The hospit has been built and equipped by the War Offi from the designs of Mr. H. B. Measure F.R.I.B.A., Director of Barrack Constructio

Nottingham.

We have received a copy of an interestin publication entitled "The City of Nottingha —Past, Present, and Future," officially issu by the Corporation. The book deals wi this city's special advantages as a commerci centre and as a place of residence, and contai several useful maps and illustrations.

Crystal Palace Engineering Society.

The "Wilson Premium" for the best pap read before this Society (affiliated to the Socie of Engineers) during the present session h been awarded to H. M. Wilson for his pap on "Concrete." Other papers read before t Society were "Petrol Engines," by W. Wemyss, and "Railway Bridges and th Constructional Details," by C. L. C. Brock. T premium was presented to Mr. Wilson by Mr. Patten Barber, M.Inst.C.E., Past-Preside of the Society of Engineers, and of the Ins tution of Municipal and County Engineers, the 130th Distribution of Certificates at t above school, at which he presided on April 6.

The War Damage Committee

At the general meeting of the War Dama Committee, held in the Guildhall, London, the 13th inst., over 300 municipal authorit were represented. The object of the Committ is to urge the Government to abandon th Scheme of War Damage Insurance, and pr vide out of National Funds for compensati to those who suffer damage from the attac of the enemy. A memorial to this end is be presented to the Prime Minister, but t Committee feel that they should not prese their case to the Government until they are i position to prove beyond fear of contradicti that they have the support of the count In a recent circular they say:—"We thi there can be no better way of demonstrati what the opinion of the country is than ascertain the views of the municipal authorit and other corporate bodies in every part of United Kingdom."

The Wonder of Work.

Harper's Magazine for March contains so specially interesting articles, including one Mr. Joseph Pennell on "The Wonder of W in the North-West," illustrated by ei characteristic drawings in tint by the auth who says:—"Art follows commerce. T profits from commerce in the past were used build temples and shrines to the glory of patr saints and for the saving of souls. To-day profits from commerce are devoted to the bui ing of something bigger than ever has be built. No longer is the Church the great patr of art. Artists to-day do not seek commissi from popes and princes, but from captains industry and politicians. While in other da popes and princes built churches and pala which are still the wonder of the world, to-d Commerce and Industry are doing work equa impressive. Our modern mills and docks a canals and bridges are even more wonder They are our triumphs of art, and yet har anyone records their building. We are familiar with these masterpieces before eyes that we pay no attention to them. make few if any records of our greatest mo ments, our greatest triumphs in engineer and architecture which are far more amaz than the work of the past, and quite as w worth recording. The mills and docks a canals and bridges of the present are m mighty, more pictorial, and more practical th any similar works of the past; they are the t temples of the present. Our mills are as w worth painting as mediæval churches."

HADWICK PUBLIC LECTURES:

MILITARY EMERGENCY HOSPITAL CONSTRUCTION.

At the Royal Sanitary Institute, 90, Bucking- m Palace-road, S.W., on Thursday, April 6, Maurice Fitzmaurice, C.M.G., Chairman, esiding, Mr. A. Saxon Snell, F.R.I.B.A., R.San.I., delivered a lecture on "Emergency ilitary Hospital Construction." The lecture s illustrated throughout with a most interest- g series of plans and views of military hospitals England and abroad. In the course of his marks the lecturer said:—

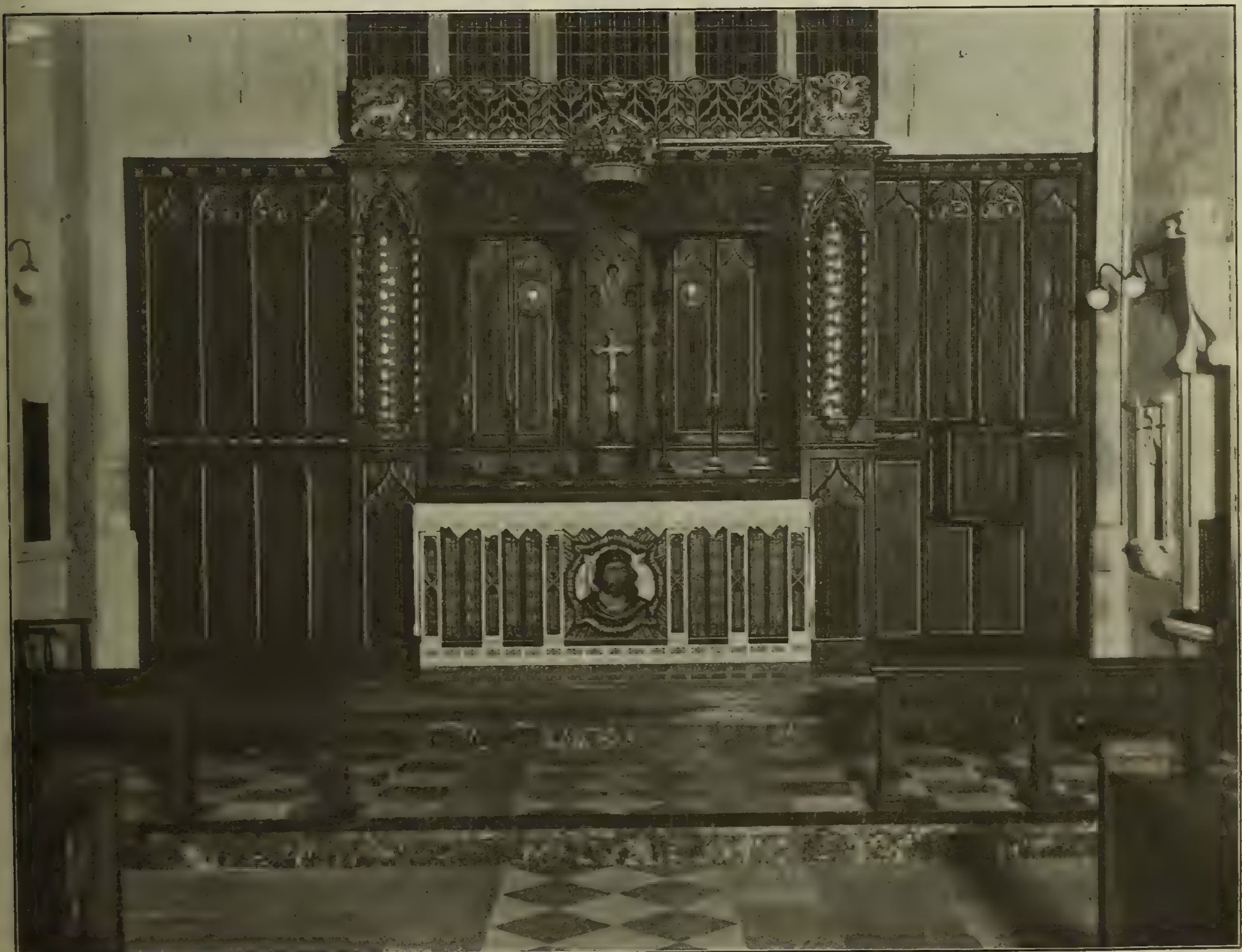
"To meet the emergency of war, the War fice has always reckoned upon making use spare accommodation in voluntary and blic hospitals and infirmaries; and, of course, its own service hospitals. In addition to ese arrangements have been made for quisitioning a large number of public buildings, hools, etc., for conversion as temporary spitals. Other countries have made similar rangements, and it is quite in accord with eir policy of thoroughness that the Germans ve in many of their public schools made ecial arrangements for converting them into spitals. In addition to the conversion of isting buildings, the War Office has also ntemplated the erection of temporary emer- ncy hospitals, for which purpose detailed ans have long since been prepared; such ildings could be erected at short notice, very ickly, and at small cost.

The scale of the present war is so large that any civil architects have been called in to sist the War Office in carrying out temporary spital schemes. It was inevitable, however, at many of the plans show considerable riation from the War Office model, both as gards planning and construction; although, of course, in every case such plans had to be submitted to and approved by the War Office. The variation in planning is instructive and interesting.

One of the first of these hospitals was the 1st Eastern Hospital at Cambridge, which is remarkable for being designed upon the open-air principle. It represents an act of faith and courage on the part of those who initiated it, amongst whom I may mention Professor (now Colonel) G. Sims Woodhead, and Colonel Griffiths, the Officer Commanding. It was designed and carried out by Mr. Charles Skipper, of Cambridge. Open-air wards for use both in winter and summer are by no means new in this country. For instance, Dr. Philip Boobbyer, Medical Officer of Health at Nottingham, has had several in his district for a number of years. In these every kind of disease has been treated (not excluding pneumonia) winter and summer. The value of roughly improvised buildings and sheds, which are practically open-air, is referred to by Miss Nightingale, Dr. Brocklesby, Sir John Pringle, and as far back as 1758 by Dr. Guy. The nucleus of these temporary hospitals is generally an existing hospital or a house, the permanent buildings of which are of considerable value as administrative offices or staff quarters.

Methods of construction vary. The War Office model plans provide for a framing of timber, lined on the inside with plaster slabs and on the outside with corrugated iron; roofs are also finished with corrugated iron. Timber framing lined inside and out with asbestos sheets is another method of construction, and these buildings are more sightly and no less fire-resisting. Ruberoid is used on the roofs. The flooring is of tongued boards and wood joists. At Leicester the walls are of brick, and the floors cement. At Shorncliffe Mr. White has covered his floors with linoleum, than which there is no more satisfactory ward floor. Heating in closed wards is generally by means of steam pipes and radiators. At Shorncliffe anthracite stoves are used. In open-air wards no heating whatever is provided. Nevertheless, a few open fires are desirable, and in the later buildings at Leicester Mr. Perkins Pick has provided one at the end of each ward in a partly enclosed day room. They are appreciated for the appearance of comfort, and they provide also for the nurses some means of warming their hands previous to changing dressings, etc. Electric lighting is general throughout.

In these buildings it is not usual to observe any meticulous care in the rounding of internal angles and in the avoidance of dust-ledges. Even the sinks and lavatories are generally supported on rough wood frames. The buildings are, of course, meant to be temporary, built quickly, and at very small cost, and these matters are incompatible with refinement in detail. Nevertheless, these refinements cannot safely be, and are not, ignored for isolation hospitals and in operating theatres. One matter—and it can scarcely be called a refinement—is rather generally ignored, *i.e.* a layer of concrete over the whole surface of the ground of the building. It may be of less importance if the building is raised a few feet above the ground, so as to provide a clear sweep for the air, otherwise, especially in enclosed wards, ground air is bound to find its way upwards, and the quality of ground air is variable and not to be ignored with impunity. The cost of these buildings varies greatly. The War Office model plan is estimated between £60 and £70 per bed, but the Cambridge, Canadian, and Glasgow Hospitals were about £25 per bed. At Leicester the ward blocks only cost £15 10s. per bed."



Altar and Reredos, St. Mary the Virgin, Laira, Plymouth.

Mr. T. R. Kitsell, Architect. (*See page* 282.)

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ILLUSTRATIONS.

St. Mary the Virgin, Laira, Plymouth.

THE walls are built of Dartmoor granite of varying tones of yellow and brown, blending well with the sandstone dressings. The church is not completed for want of funds.

The altar and reredos are in oak—the "Mensa" being of one slab of "dove marble." The altar is wholly painted and gilded, and the reredos and side panelling "picked out" in colour and gold.

Much of the moulded work—the main roll members—are chequered in gold, but there is no sign of it in the photograph, and a dark blue background to the cross niche makes the coving appear as a flat panel.

The band of vine foliage and fruit is treated in a realistic manner, springing from stems which spread out at the branches after the manner of fan vaulting. T. R. KITSELL.

Chancel of St. James the Less, Plymouth.

THIS illustration shows the new organ loft and vestry screen in oak; the new hanging rood in oak; the new dwarf alabaster chancel screen and wrought-iron gates, and pulpits (ambone), also in alabaster.

The whole chancel has been changed in character by cutting away the lower portion of the original pitch-pine roof principals and the stone corbels, substituting an oak barrel vault with ribs, with carvings at intersections, etc. The walls have been decorated in colour, the lower portion panelled in oak.

New altar and reredos and server's recess, oakstalls, etc., in place of the pitch-pine chancel fittings and the glazed tile dado. The various changes have been made not as a whole scheme, but from time to time during the last few years.

Parish Hall, New Brighton, Cheshire.

THIS is a pleasing and characteristic example of Mr. Guy Dawber's work.

Training College, Wellington, New Zealand.

THIS building has been erected in Wellington from the designs of Mr. W. Gray Young, of Wellington. The building was one of a group of three for which a competition was held, and Mr. Young's designs were awarded first premium.

Owing to the limited nature of the site the Training College had to be erected right up to the street frontage. The building contains two lecture-rooms, art-room, library, men and women's studies and common-room, geographical and chemical laboratories, museum, principal's office, and the usual sanitary arrangements. The exterior is finished in lime-washed rough cast and pressed brickwork.

Wren's Churches.

WE give illustrations of the tower of St. James, Piccadilly, from a drawing by Mr. Harrold Norton, and some excellent measured drawings of St. Benet, Paul's Wharf, which we dealt with in last week's issue, and which is one of the most interesting of Wren's smaller churches.

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MEETINGS.

FRIDAY, APRIL 14.

Institution of Mechanical Engineers.—Mr. Walter Clemence on "Theory and Practice in the Filtration of Water." 6 p.m.

Town Planning Institute.—Mr. Barry Parker, F.R.I.B.A., on "Horizontality and Verticality in the Architectural Treatment of Town-Planning Schemes." 8 p.m.

MONDAY, APRIL 17.

Liverpool Architectural Society.—Annual general meeting. 6 p.m.

TUESDAY, APRIL 18.

Institution of Civil Engineers. — Annual general meeting. 5.30 p.m.

WEDNESDAY, APRIL 19.

Concrete Institute.—Ordinary general meeting. 5.30 p.m.

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OBITUARY.

Sir Colin Scott-Moncrieff, K.C.S.I.

The death, on April 6, is announced of Sir Colin Campbell Scott-Moncrieff, K.C.M.G., LL.D. (Edinburgh), aged eighty years. He was the sixth son of Robert Scott-Moncrieff, of Fossaway, and was educated at Edinburgh Academy and the H.E.I.C. Military College, Addiscombe, whence he passed out into the Bengal Engineers in 1856. He was employed in the Irrigation Department of the N.W. Provinces and as Chief Engineer, Burma. Having retired, with the rank of colonel, in 1883, he was appointed Under-Secretary of State Public Works, Cairo, with charge of the Irrigation Department. In 1890 his grea engineering work—the restoration of the Nil burrage—was brought to a successful end He left Egypt in 1892, and was then appointe Under-Secretary for Scotland, an office he hel for ten years. In 1902-3 he was President, i India, of the Indian Irrigation Committe Sir Colin Scott-Moncrieff was the author o "Irrigation in Southern Europe," 1868.

Lieutenant A. T. Hardman.

Lieutenant Adrian T. Hardman, of th Royal Fusiliers, died on March 30 of wound received in France, aged twenty-five years He was the only son of Mr. T. Hardman, o Northaw, Potters Bar. On leaving Christ' Hospital he became a student Architectura Association, and gained a fourth year travelling studentship; he passed the Intermediat Examination of the Institute. He was article to Mr. F. R. Farrow, F.R.I.B.A., and was pupil of Sir Ernest George, A.R.A., & Yeates At the outbreak of the war he, when he wa studying in Paris for the École des Beaux-Art joined the Inns of Court O.T.C., and obtaine a commission in the Royal Fusiliers (Specia Reserve) in February of last year, and wa appointed bomb-instructor.

Mr. L. Ower.

The death has occurred of Mr. Leslie Ower familiar in business circles in Dundee as th senior partner of the firm of Messrs. Lesli Ower & Allan, architects and civil engineers Whitehall-street.

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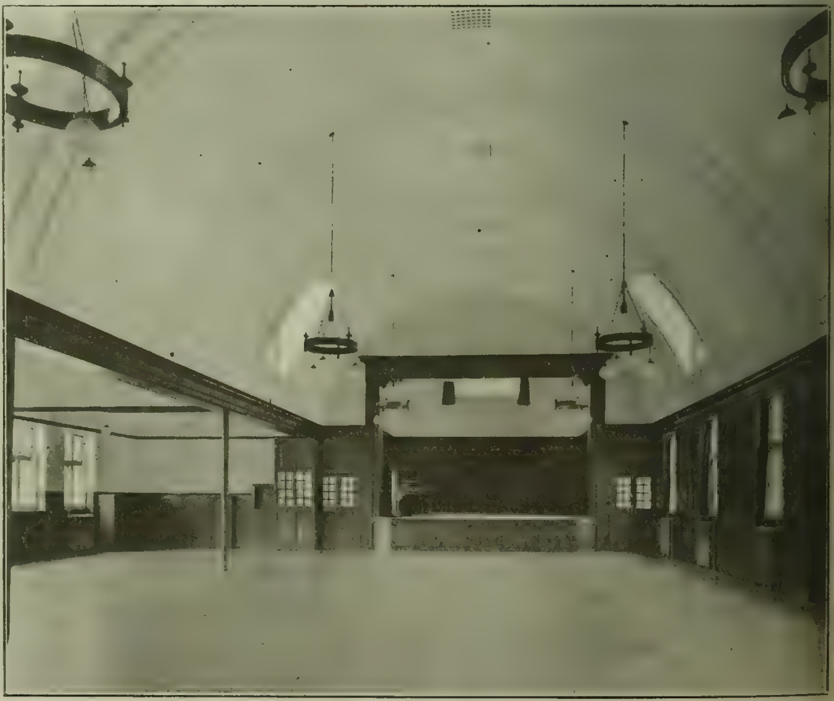
FIFTY YEARS AGO.

State of St. Paul's, Deptford.

AN inhabitant writes:—"I have th pleasure of reading your excellent publicatio once a week, and cannot but admire you strictures and remarks on sanitary matters If you would take a walk to Deptford High street, and turn to the left, down Hamilton street (in particular), as well as Hyde-street you would find the lower end (of the first named street) one sheet of water, which ha no means of discharging itself; so it soak into the earth, year after year, and mus ultimately evolve miasma, which some day or other will exhibit itself in an outbreak o fever or sickness amongst the inhabitants."

[*** From the *Builder* of April 14 1866.—ED.]



Parish Hall, New Brighton, Cheshire.

Mr. E. Guy Dawber, F.R.I.B.A., Architect.

CIVIC DESIGN SECTION.

COMPULSORY TOWN PLANNING.

MR. H. R. ALDRIDGE recently read a paper on the subject of "Compulsory Town Planning" at a general meet- of the Town Planning Institute, in which discusses the town-planning proposals in e "Urban Land Report," which states at, while improvement has taken place ently, "over the vast majority of urban eas the development of building estates ntinues on the old unsatisfactory lines." e conclusion has been reached that it is acticable to extend the benefits of town anning and to render uncontrolled develop-ent impossible. The means suggested are at every local authority should be compelled prepare a scheme for the development of unbuilt-on area within a specified time, at the maximum number of dwelling-houses ould be fixed, and building lines should be opted along existing roads which will render eir widening to meet future traffic require-ents practicable. The Local Government oard should see that certain minimum require-ents were satisfied, and if a local authority d not prepare a scheme within the given riod the Local Government Board should be powered both to prepare and enforce a heme of its own. Mr. Raymond Unwin oints out that the adoption of the Committee's oposals need not necessitate an increase the cost of road and sewers per house, but at if landowners adopted the new methods development the garden attached to each ouse could be quadrupled for a very small crease in rent. Mr. Aldridge differentiates tween the value of the various municipal rvices, which he divides into three classes :—rst, those relating to health and safety, such sanitary and health departments, water, nd the police ; secondly, those which add to e efficiency of the industrial units of the mmunity, such as gas, electricity, and means transit ; and, thirdly, those which add to e comfort and amenity of the community connection with such objects as libraries, rks, and playgrounds, and means of transit r purposes of pleasure or recreation, and he gues for town-planning control as a means producing the greater health and safety of e community, its industrial efficiency, and s pleasantness.

The objections raised to compulsion are, he ints out, firstly, that the State has not the wer to force local authorities to perform these sks; and, secondly, assuming that it is done, ils may be intensified instead of being ssened.

Experience has shown that very clear lvantages have been gained where town-lanning schemes have been adopted, as in e Hampstead Garden Suburb as compared ith Tottenham, new Edinburgh as compared ith the old town, and numerous other cases.

The arguments against the proposition are ated by Mr. Aldridge as being, first, that town lanning should not be made obligatory until ore experience has been gained with regard the standards to be adopted in the prepara-on of schemes ; secondly, that a sufficiently rge number of skilled town-planners are not vailable ; and, thirdly, that it is best for local thorities to learn the advantages of town lanning gradually, as they have done with her adoptive powers.

These objections are answered by the fact hat six years of experience under the Housing nd Town Planning Act are available, that oor planning is better than none at all. As the third objection, it is pointed out that in e case of gas, water, and other services there as always been the inducement that they could e made directly remunerative, which does not ply to town planning any more than it does education ; and Mr. Aldridge asks very pertinently what educational work would have been undertaken if it had not been obligatory.

We consider a very good case has been made out for the adoption of some system of compulsion with regard to the preparation of schemes, always providing that some accurate data as to the probable increase of population in a given area is available. That is to say, that in a slow-growing or stationary district harm might be done by the preparation of a scheme the ultimate economy of which would depend on its complete development, for there are everywhere visionaries who see before them future towns in cornfields, and we foresee a possibility of an ambitious local authority preparing schemes much in excess of the legitimate or probable growth of districts. Birkenhead was laid out in the expectation that it would rival Liverpool in size and as a shipping port, and for years it had miles of streets laid out without the buildings which would have justified their existence. We believe that after the war it might be as well if the Local Government Board prepared a survey of the urban and rural districts of the country, considering them with relation to manufacturing and other problems, and then, having made up its mind that the growth of population would be great in certain areas, made it compulsory on the authorities within those areas to prepare schemes and submit them for approval.

Another point needs emphasis, which is that the provision of proper housing facilities in every district will after the war be an even more difficult question, as far as finance is concerned, than it has ever been before. It is therefore necessary that full advantage should be taken of private speculation. Experience shows that private enterprise in building is less costly than municipal or State directed enterprise, which should in the interests of economy only be considered as a last resort. If a municipality builds 500 houses it requires a large staff of supervisors, and labour, using its power on local bodies, sometimes extorts conditions which would not be conceded by the private speculator. If twenty-five builders can be induced to build twenty houses each, the community reaps the advantage of individual enterprise, nor is it handicapped by the risks incidental to the exercise of executive functions. But if we are to have private enterprise we must see that the building speculator is not harassed and handicapped by legislative enactments, making it possible to take away his profits while refusing to share his losses. As far as actual building is concerned, we entirely agree that town-planning schemes should be made compulsory wherever the growth of population makes their adoption advisable, but we must not assume that the industrial development of the country will necessarily be enormous after the war. It should be if our Government and people act wisely ; but the golden fruit will not fall into our laps without much striving, nor can we in this country look forward to the freedom from competition which was our lot in the first half of the nineteenth century. Commercial prosperity depends on the scientific utilisation of our natural advantages, on education, work, and the avoidance of those periodic outbreaks of industrial unrest which have been so common in this country during the last fifty years. Labour has to learn that the restriction of output is bad policy for the employed as well as disastrous to the employer, and that the main object is to increase trade, profits first and then to discuss their fair apportionment between capital and labour afterwards. Building activity is the outcome of trade prosperity, but cannot produce it, and the betterment of housing must be financially a good proposition or it will never be undertaken on a large scale. The nation can only progress if it learns the lesson of war—"United we stand, divided we fall"; every advantage thrown away by the individual damages the community, and we have rivals in other countries only too eager to make profit by our weakness and folly. We think, in brief, that extensive town planning is a necessary corollary of vigorous natural development, but will remain a dead letter if the nation is decadent or divided by industrial faction.

NATIONAL HOUSING AND TOWN PLANNING CONGRESS:

Home Problems After the War.

CAXTON HALL, Westminster, was filled on Tuesday at the opening of the National Congress promoted by the National Housing and Town-Planning Council to consider home problems after the war. Councillor Harold Shawcross (Chairman of the Council) formally opened the Congress, and said they had representatives present of the local authorities, the architectural profession, the building trade, both employers and employed, and a large number of societies interested in the subject. He claimed that the conferences promoted by the Council had always struck a note of practicability. They had always endeavoured to have some kind of remedy to meet any difficulty which arose. What they wanted to be assured of was that there would be capital available for housing after the war, and, as the only people who could raise money was the Government, they would ask them what their intentions in the matter were. They did not want to muddle through with the matter as they had muddled through with so many other matters in the past. The best brains in the country were now available for designing houses and laying out estates, because architects were now almost without work at all. Many of them were taking up the question and making civic surveys of different parts of the country, and he did feel that these brilliant brains which were now lying fallow could be set to work trying to elucidate the question of the best design of cottages for different districts, and in the preparation of plans which could be available for local authorities. He was sure many architects would be only too glad to be busy on problems of that sort.

Mr. H. R. Aldridge (Secretary) having explained the procedure of the Congress,

Mr. B. S. Rowntree (York) pointed out that millions of men from the Army and the munition factories would be demobilised at the end of the war. It was for the Government to see that these men were not unemployed, and if there was unemployment it would be their own fault. They were concerned at that Congress with the building trade, which would be in a state of great dislocation. With the spirit of uncertainty which would prevail the ordinary investor would not select bricks and mortar for his investment. Therefore unless they took steps in advance the building trade was likely to be hardly hit during the period of dislocation. Another reason for taking early steps to develop a vigorous policy of building directly the war stopped was that there was now a house famine in the country.

Councillor S. Smethurst (Past-President of the National Federation of Building Trades Employers) said it had been a painful thing to him that the most important section of building trade employers had neglected the building of houses, with the result that much of the house building in the large urban districts had fallen into the hands of a class of persons who had not produced good healthy houses. It might cost 20 per cent. more to build a house well, but in the end it was more economical. He trusted in the future, civic authorities would see that houses were built by men whose reputation would be a guarantee of quality.

Mr. A. G. Cameron (Amalgamated Union of Carpenters and Joiners) contended that private enterprise had failed to meet housing needs, and the State must step in.

Housing Schemes After the War.

The Congress proceeded to consider a paper by Councillor H. Shawcross on "The Preparation of Housing Schemes to be Placed in Operation at the Close of the War." He pointed out the virtual stoppage of the building of working-class houses since the outbreak of the war, which was due in some measure to the refusal of the Government to lend money to the local authorities and public utility societies for the purpose. He considered it would be necessary, at any rate in the months directly succeeding the close of the war, to rely primarily on local authorities to remedy the shortage of houses. He moved:—"That this Congress urges the Government to re-enact the Housing No. 2 Act (1914) to be placed in operation at the close of the war and to increase the amount provided under the Act to £20,000,000."

Answering a question, the Chairman said the £20,000,000 asked for would be the capital sum for building houses, and they reckoned it would provide 100,000 houses.

Councillor Coyle (Mid-Lanark) moved an amendment to the effect that the Government should be urged to make such advances to local authorities as would enable them to provide houses at reasonable rentals having regard to all necessary and equitable circumstances and conditions.

Mr. Wiseman (Workmen's National Housing Council) proposed as a further amendment that the Government be urged to set aside the sum of not less than £20,000,000 to be placed at the disposal of local authorities for housing purposes after the war.

It was decided to refer all amendments to the Standing Orders Committee.

Mr. Hill (Workmen's National Housing Council) urged that the working classes ought not to have houses unpleasant from the architectural point of view foisted on them. They did not want long rows of concrete houses.

Mr. Cheverton-Brown (Chairman of the National Federation of Property Owners) considered neither the resolution nor the amendments were practical means of dealing with the subject. It was wrong to talk of private enterprise having failed, seeing that 98 per cent. of the houses for the working classes were erected by private enterprise. He proceeded to move a resolution to the effect that all national legislation hampering the provision of housing for the people should be repealed or amended in order to restore public confidence, encourage private enterprise, and resuscitate building operations.

The Chairman ruled the amendment out of order.

At the commencement of the afternoon session other amendments were proposed which were referred to the Standing Orders Committee, and it was decided to take a vote on the following morning.

Amendment of Finance Act.

The next subject for discussion was that of general housing finance at the close of the war, and especially the need for removing legislative difficulties which hamper developments in the building trade; the possibility of amending the law in regard to the compounding of rates, etc.

Mr. A. W. Shelton (Nottingham) moved:—"That this Congress is of opinion that the legislation promised by his Majesty's Government in 1913 and again in 1914 with regard to the amendment of the Finance Act of 1909 should be now carried out in order that an admitted obstacle to the building of working-class houses may be removed and the provision of such houses stimulated at the close of the war." He considered that at the termination of the war there would be a shortage of 600,000 houses. It was no good leading people to believe they would get houses at less than their economic value, and he made the strong plea that, whatever was done by the State or the local authorities, it ought to be made possible for the men who had built 90 to 98 per cent. of the working-class houses in the past to continue their work in the future.

Mr. S. Smethurst (National Federation of Building Trades Employers) seconded the motion, and remarked that the Finance Act had had the opposite effect to what Mr. Lloyd George intended.

Mr. Cheverton-Brown expressed the opinion that the Act was so bad that it would be better to repeal it altogether.

A lengthy discussion followed which had little relation to the resolution before the meeting. Nearly every speaker dealt with the question of State and municipal *v.* private enterprise, and at times the proceedings were a little heated. The resolution was eventually carried. (*To be continued.*)

THE SURVEYORS' INSTITUTION: TOWN PLANNING.

An ordinary general meeting of the Surveyors' Institution was held on Monday at No. 12, Great George-street, Westminster, S.W., Mr. Sabin in the chair.

The minutes of the previous meeting were read and confirmed. It was announced that twenty-three publications had been presented to the Library in addition to eight donations of 2 guineas each. It was agreed that the thanks of the Institution be conveyed to the donors.

Mr. W. R. Davidge (Fellow) then read a paper entitled "The Principles and Position of Town Planning," in the course of which he said:—

"Before entering upon the discussion of accepted town-planning principles, it is well to realise that the term "town planning," embracing all communities large and small, is a very English one. In the United States and Canada the universal description of the same thing is "city planning," which seems at first even more inappropriate, until it is remembered that in America a community may be a "city" even if it has only 500 people in it.

With us the cities of London and Westminster and our other cathedral cities are of so ancient a foundation that it gives us somewhat of a shock to find that many of our Colonial towns have springing up around them scores of such "cities." Melbourne, for instance, is surrounded with numerous growing suburbs, nearly a dozen of which are dignified by the name of "city." So general has the practice become that, by special enactment of the State Government, it is now possible to adopt the name of "city" as soon as the population reaches 20,000. The term "town planning," however, fairly correctly describes the methods so far adopted in England, as contrasted with the expression "town building" ("*stadtebau*" or "*construction des villes*") prevalent on the Continent. In this country, under the Act, our effort is principally directed to planning the land around our towns, and so far the architectural or "town building" side has hardly been touched. This variation in nomenclature expresses in another form the varying ideals and national characteristics of "town planning" or "city planning" as understood in the various countries of the world. It is well that this divergence of national outlook should be appreciated before we proceed to discuss "accepted principles, by whom accepted, where and why accepted." There has in the last six years been an amazing wealth of literature and such a mass of reports on various phases of the subject that it is somewhat difficult to disentangle the exact facts as existent. In Great Britain the creed of town planning may be expressed briefly as "more air, more accessibility, more attractiveness!" or in other words, health and social well-being, particularly as applied to the prospective building land around our towns. In conjunction with this there is at the same time, so far as private estates are concerned, a very evident effort, in some cases almost a straining, after the picturesque. In modern garden suburbs, equally with the mediæval town, the effort after picturesque features has secured many charming examples, which are a welcome relief from the drab of the everyday town. The Government housing scheme at Woolwich, built during 1915, is one of the most successful examples in this respect. So far, however, as can at present be seen, the tendency municipal town-planners under the powers give by the Act is not altogether in the same directio

Municipal surveyors, as a body, fully appr ciate the great possibilities of town planning fro the health and amenity point of view, but so fa at any rate, the "picturesque" is entirely in th province of the private owner and his architec aided or retarded by the jerry builder. In Pari the desideratum is more often the spectacula or monumental art of "*construction d villes*" in the grand manner. In Berlin "*d Stadtebau*" represents the same ideal of imposin public buildings and monumental-lookin structures which are in reality tenemen dwellings. As a well-known German profess said in 1910 at the Royal Institute of Britis Architects' Conference:—"What we in Berli try to do is, at all times and to the utmo of our power, to *impose* upon the stranger!"

American cities mostly regard city plannin from one of two ideals, either the "civic centre ideal or the "rapid transit" ideal, both of whic our American cousins would describe as "goo business propositions," and business is the ke note of all sound proposals.

Colonial towns are, as is well known, mostl laid out (for the convenience of the surveyor on north and south lines, with all streets a right angles, and, until quite recently, th tendency has manifested itself in the lay-out practically all towns which have had to b developed rapidly, generally in the absence any special natural features.

It has been necessary in nearly all cases t peg-out and sell plots of land rapidly, and th Colonial surveyor in laying out a town ha almost unconsciously come to regard it a "cutting up so many sections," simply an solely "land jobbing." The idea of a communit deliberately moulding its own growth to i future needs has so far hardly been realised.

So much for varying national ideals; but whe we consider the varying character of the Englis town itself we find almost as widely varyin ideals. Liverpool with its docks and Ma chester with its commerce, each has quit different problems from, say, the special prob lem of London or of a pleasure resort such Bournemouth. The suburban communitie too—take Walthamstow for an example—have problem all their own.

The Need for Town Planning.

One thing that stands out clearly, thoug in the maze of these different national and loc characteristics is the paramount need for som form of town planning.

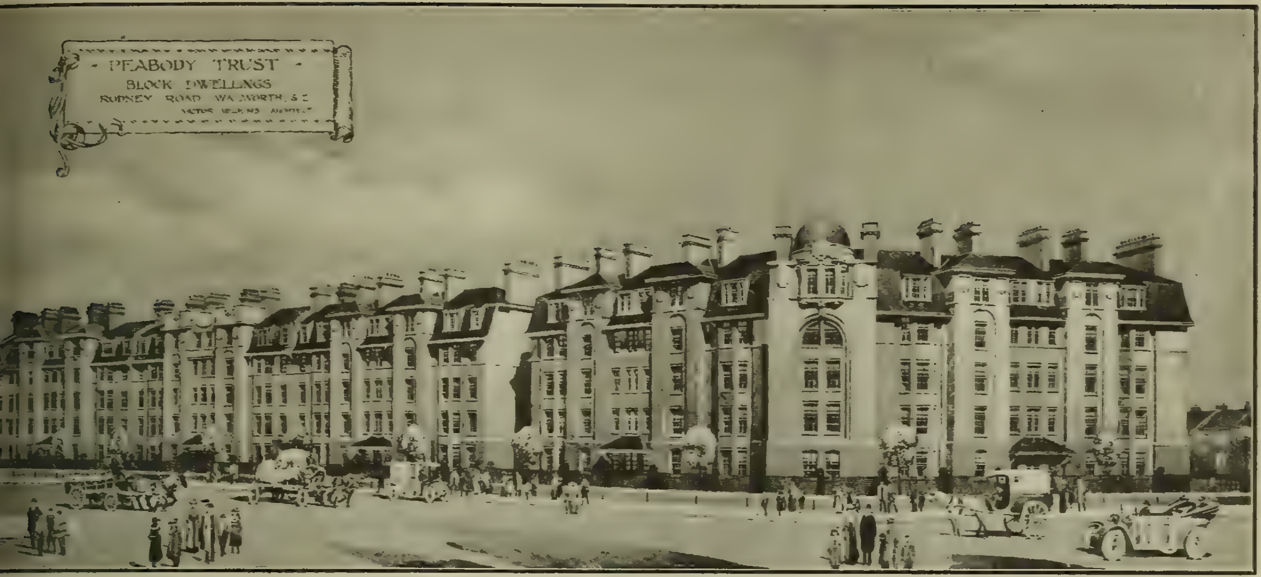
Whether one sets out with the purpose sweeping away slums or of providing for t future growth; whether one is an enthusiast f parks and open spaces, or merely desirous the commercial advantages of rapid trans and business facilities, all nations and near all communities are agreed that, if it is reaso able to plan the alterations to a house that o intends to inhabit, it is still more desirable plan the town and its extension; hence t first general principle which we can all acce is the universally recognised need for tow planning.

Our first accepted principle, then, is:— *town plan is necessary.*

Following on this, however, must come t recognition that such a town plan is not a sto article, but must be made to the measu of the district. National characteristics a aspirations, as we have already seen, ha resulted in widely varying national conceptio on the subject of town planning, and localiti vary as widely in their views as to developme particularly as to the kind of development whi is suitable for their town. *A town's plan m be its own.*

Community Control.

The English Town Planning Act of 19 has focussed public attention on the subje but it should be remembered that this Act w long preceded by the Italian, Swedish, a Prussian Town Planning Acts, all of whi provide not only for town extensions and n streets being laid out on the lines prescrib by the municipal authority, but also give t authorities much greater powers of purchase expropriation. The one thing, however, whi all have in common is the need for commun



Peabody Dwellings, Walworth.

Mr. Victor Wilkins, Architect.

No one in this country would in
circumstances consent to the bureau-
ictation which is so evident in the
l affairs of Central Europe, but never-
some form of community control is

'endencies in Town Planning.

r, in English town-planning schemes,
s been a growing tendency to draw up
trictions which have a negative value
preserving the amenities of a district.
restrictions alone are insufficient.
light of the experience of the past six
at there shall be a powerful *constructive*
ntrol is equally necessary. Some years
Paul Waterhouse suggested that there
e appointed to each district throughout
ntry an architect and surveyor who
ave charge of all constructive design
se dictum should be final. Without
this length, however, there is no doubt
surveyors throughout the country
exercise a beneficial control, though
ers given by the various by-laws and
Acts hardly in any instance give con-
design.
ecoming increasingly evident, however,
ie development of our towns under the
anning Act of 1909 is to be any advance
the current estate development prior
ct it will be necessary to have much
ntrol over the design of buildings than
ase in the schemes so far adopted."
e lecturer added, had up to the present
n effected in the case of Ruislip-North-
hich stands alone.)
is excellent paper is a treatise on
nning in itself, and the work of one
s formed practical conclusions based
vations and experience, we hope to
greater part of the remainder of the
n future issues.—Ed.]
W. Rushworth moved a vote of thanks
lecturer for his valuable paper, the
eing seconded by Mr. Edward Willis,
orted by Colonel Hellard, Messrs. P.
kett, Gilbert Howton, Richard Fowler
ingham), E. C. Barton (of Brisbane),
wson, J. W. Tyler, and the Chairman.
ecretary announced that the next
of the Institution will be held on
May 8, at 5 p.m., when a paper will
y Mr. F. N. Keen entitled "A Scheme
evelopment of Agricultural Land."

STATUE OF QUEEN VICTORIA.

atue of Queen Victoria, which has been
by Mr. Bruce-Joy for the Government
Columbia, has lately been placed in
al Exchange, London, where it will
ntil the end of the war, when the work
nt to Canada.

PLANNING FOR A MANUFACTURING TOWN.

At a meeting of the Institute of Sanitary Engineers held on April 5, under the Chairmanship of Mr. H. Percy Boulnois, at Caxton House, Westminster, a paper was read by M. Andre Le Marchand on "Planning for a Manufacturing Town of 50,000 Inhabitants."

M. Le Marchand pointed out that in the present day the creation of a manufacturing or industrial centre could not be undertaken without due consideration of the examples of previous efforts directed towards an ideal of comfort and welfare, the need of giving a man some beauty in his environment, and providing him with the means of enjoying the healthiest and pleasantest life possible. In the planning of a new town no sod must be moved nor a brick laid before a complete plan of the new city had been made; the proper restriction of spaces allotted according to requirement; the good disposition of roads, gardens, recreation grounds and parts reserved for cultivation; the scheme of drainage, water supply, lighting, etc., must be indicated at the outset; and the spot appropriate to each building of the new municipality must be allotted according to the conditions called for by the nature of the land, the configuration of the most suitable routes for traffic, etc. The line to be followed, and that which the town-planner should aim at, was the principle of garden cities, for the garden city was self-contained; it was industrial and agricultural, whilst forming an agreeable residential locality. The question of open spaces and the area of the land in proportion to the area of buildings was of prime importance. Property designed for a town of 50,000 inhabitants ought, apart from the rural belt (which should be two-thirds of the total area), to provide open and ample spaces set apart for public buildings, recreation grounds, squares, gardens, etc. The total area required for a town of 50,000 inhabitants would be about ten square miles. The author laid stress on the necessity of avoiding monotony in the planning of the town, and said the planner should vary the street views by judicious settings forward or backward of the building lines and vary the junction of avenues by means of "round points" surrounded by buildings of diverse designs, which points could form the connection of different avenues. Dealing with the arrangement of houses, he suggested that, whilst following the rule of an open space to each dwelling and a small garden running back from the road to the house, a successful scheme of plotting should include an adequate supply of houses grouped together, either detached, semi-detached, or in a block. Each group should consist of a limited number of houses in order to prevent the appearance of too massive a block. He thought it would be wise for the architect to seek the advice of a sanitary engineer competent to select the most suitable sites for the construction of waterworks, the installation of sewage works, for the disposal of house refuse, the location of a cemetery, a crematorium, mortuary, slaughter house, hospitals, gas and electricity works, etc. As to the style and character of the town, it rested with the architects who at different times would be called in to maintain its individual character by employing different styles which should be grouped so as to form an harmonious whole. The model city must attract at first sight by its well-conceived variety of architecture, its beauty of colour, its freshness and cleanliness. The materials chosen for the different buildings should be furnished by the country, and, above all, natural products should be used in building. For artistic reasons the construction of buildings entirely in iron or massive blocks of concrete should not be permitted, nor the use of any composition in imitation of a natural material.

PEABODY DWELLINGS, RODNEY-ROAD, WALWORTH.

These dwellings have been erected on an island site in Rodney-road, Walworth, S.E., for persons of the working classes. The dwellings consist of ten blocks, and are five stories in height. The elevations are built of red sand-faced bricks with Luton brick base, artificial stone dressings, and slated roofs. The gates and railings are of wrought-iron.

Accommodation has been provided for 179 self-contained one, two, three, and four roomed tenements, each tenement having, in addition, its own entrance lobby, scullery, and water-closet.

There has been provided, free of charge, for the use of the tenants, a detached building, comprising a steam-heated laundry, bath-house, and shelter, occupying the centre of the site. Coal stores are also provided in this detached building, where tenants can obtain coal from the fund at a low rate all the year round. The charge of 1d. per week is made for the use of the perambulator sheds and bicycle sheds. All the staircases, water-closets, bath-houses, and laundry have the walls tiled. Each living-room has a dresser and ventilated meat larder and cupboard as a combined fitting, and all the bedrooms have a wardrobe cupboard. The one-room tenements are provided with both these fittings. Hanging space is provided in addition in a recess in the entrance lobby. In each scullery there is a deep white-glazed fireclay sink with teak draining-board, coal bunker to take 3 cwts. of coal, portable washing copper and gas cooking stove. The living-rooms have the latest pattern portable ranges and hot water supply to the scullery sink. The tenants can obtain a constant supply of hot water from a tap arranged in a convenient place in the courtyard. There is a store and workshop accommodation for the use of the superintendent and porters for doing any small immediate repairs.

The buildings are of fire-resisting construction throughout. The lighting is by gas supplied to the tenants through slot meters; gas is also used for the courtyard lighting.

The buildings were designed by Mr. Victor Wilkins, Surveyor to the Peabody Donation Trust. The general contractors were Messrs. W. Cubitt & Co., 258, Gray's Inn-road, W.C.

THE BOARD OF AGRICULTURE'S REPORT ON THE SETTLEMENT ON THE LAND OF DISCHARGED SOLDIERS AND SAILORS.

THE Garden Cities and Town Planning Association asked their Architectural Committee to report upon the proposals of the Departmental Committee appointed by the President of the Board of Agriculture to report to him on the settlement on the land in England and Wales of discharged soldiers and sailors.

The Architectural Committee reported somewhat to the following effect:—That they strongly advocated the closer grouping of the homesteads and cottages than is suggested by the plan annexed to the Departmental Committee's Report, for if country life is to be made acceptable in competition with life in towns the village communities set up should certainly approximate to what has long been the envy of Colonial and Continental visitors—the old English type of village. The Departmental Committee suggested the use of wooden buildings. The Architectural Committee went on to say:—

"We are of opinion that wooden buildings are not, in themselves, objectionable, if proper safeguards are provided against fire, and a brick or concrete base is also provided, and the site is concreted to maintain dry and sanitary conditions and to keep away vermin. That wooden buildings may be very successful architecturally is evidenced by the many charming examples to be found in Switzerland, Norway, Sweden, in many British Colonies, and in America.

But we would point out that wooden buildings might not prove to be an economically sound investment if used in the proposed settlements. As the Departmental Committee's Report points out, the life of a wooden building may be put at thirty years. We would call attention to the fact that under usual conditions a brick building costs but very little more than does a wooden one, and it may be at the end of thirty years as valuable as it was on the day of its completion.

To make use of discarded "hutments," if these were handed over by the military authorities as free gifts, might be wise, however, as a temporary measure; but a cottage, like any other building, to be satisfactory must be designed expressly for its purpose and to fit in with its surroundings.

The successful wooden houses and other buildings referred to above will invariably be found to have been so designed.

At best an adapted military "hutment" would be but a makeshift substitute for a building designed for its purpose and a very doubtful economy, though some of the material from them might be re-used.

To re-use complete military hutments would tend to produce the unhappy effects which the use of stock patterns creates; but the fullest advantage should be taken of the economies and harmony resulting from standardisation of parts such as windows, doors, and, in fact, all joinery.

We doubt the wisdom of suspending building regulations and by-laws in the case of buildings erected under small holdings Acts. We should naturally wish that every consideration should be given to the proposal to do this; but we would urge that extreme care be taken that a door be not opened to a claim for similar facilities when a private individual is doing practically the same work as is undertaken by county councils when providing small holdings. It is interesting to remember that wooden buildings may still be erected in London, provided that they are 30 ft. away from any other building or from an adjoining property, and it seems reasonable that less stringent regulations should apply in the country.

If ample space be left at the roadside the made-up width of roads might, in very many cases, be not more than 16 ft. We suppose it to be unnecessary that we should point out that the accompanying diagram is, of course, merely put forward as giving in diagrammatic form some of the principles we suggest should control the planning of one of these colonies.

In every instance in which it is proposed to apply these principles to a specific site, it will be found that the conditions and nature of that site themselves dictate the proper disposition of the buildings and holdings upon it, and that a different plan results.

Still, we felt that the principles of planning we were advocating could better be indicated by using a diagram than by selecting a particular site (as the Departmental Committee did), and suggesting the way in which the buildings and holdings might be disposed upon that particular site.

We felt that the latter course would not suggest main principles so clearly, nor could it result in our producing a plan from which might be so clearly deduced principles applicable to any site.

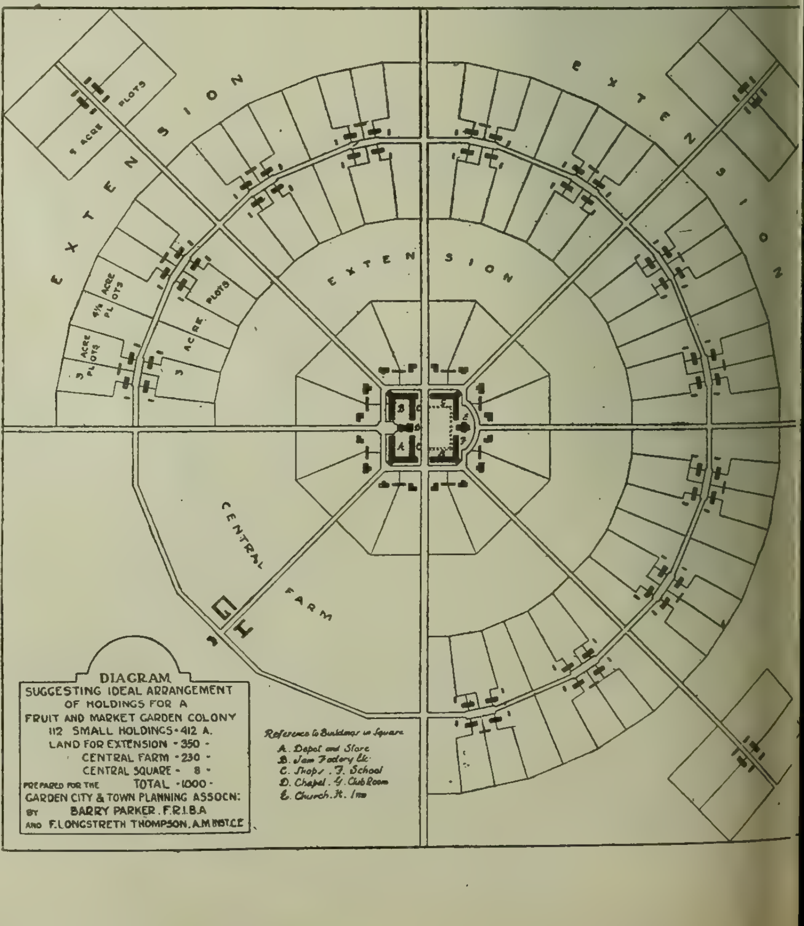
A plan for such a settlement as we are dealing with, if drawn for one site, would never do for any other site, so we felt a pure diagram would be most useful.

Our thanks are due to Mr. Barry Parker (the Consulting Architect to First Garden City, Ltd.) and to Mr. F. Longstreth Thompson for the accompanying diagram. They have assumed that the site chosen for one of these colonies would have a high road passing through it, and they have disposed the buildings in the way best calculated to reduce the cost of road-making and services to a minimum. They have brought the smallholders' cottages into groups for neighbourliness, and as close to the village social centre as is consistent with the important consideration that each cottager shall live actually upon his small holdi should be noted that, in regard to cost o making, the diagram compares favourabl the plan attached to the Departmenta mittee's Report, for, assuming the road r north and south to be an existing road i the other roads in the diagram amoun further six miles, whereas in the plan at to the Departmental Committee's Repor roads must amount to a further ten mil

Finally, we regard it as of great imp that the model plan should be one whi start all who refer to it upon lines which possibilities for architectural effects. I be said that there are no great archit possibilities in a scheme of this nature, b modest buildings at first erected will pr as time goes on, give place in many in to more important ones. To some o village communities, village halls, ins churches, clubs, and what not will be and if a plan for the whole lay-out has n adopted which provides suitable and a sites for these buildings the loss will very great one. In the least pleasing street pictures can be erected, and p grouping of buildings may result, pr that the plan adopted at the outset has em from a heart and brain sympathetic t things."

SCARCITY OF HOUSES IN GLASGO

A Conference to consider "the shortage of housing accommodation in th area" was held recently under the aus the Glasgow Labour Party Housing Ass at Govan. Five resolutions on the subje discussed and adopted. The first o called upon the Town Council to util tramway surplus, interest free, to additional housing accommodation. Th resolutions advocated the promotion Corporation of a town-planning schen securing of Parliamentary powers for of a larger area, and the assistance by the ment of local authorities in making p for adequate sanitary housing accommoda the workers. A deputation of twenty m was appointed to wait on the Town and another deputation to wait up Secretary for Scotland on his first Glasgow.



THE BUILDING TRADE.

thirty-second annual general meeting the Institute of Builders was held t Koh-i-Noor House, Kingsway, W.C., h 29. The audited accounts for the ling December 31 and the annual were read and adopted, the latter nlarged upon by the President (Mr. J. Strange). From the Report we following :—

Building Industry is passing through a eriod in consequence of the European erations of a purely building character carried out under difficult conditions, any instances have been suspended. large number of operatives usually in the trade have either obtained ent on war work or have joined his s forces. The wages paid for war ve been much in excess of those normal times, and have exerted a influence upon other callings. The of obtaining skilled and unskilled s increasing. To this may be added argo which is to be placed on the ion of certain kinds of building s. There is little doubt that the d prices of building materials and the of suitable labour will last until the he war and for some time after peace aimed. Builders realise the continued of supporting the Government in ssible way, and that it must be assisted hindered in its efforts to meet so unted a situation, however much general ons may suffer. We hail with national he action of our fellow-countrymen, g many of our members and their sons, e placed their services at the disposal ing and country; all have won renown, have been honoured with war distinc- nd some have made the supreme

ntices.—Fully realising the necessities uilding trade to make provision for its elfare, the Council has given its earnest n to the question of apprentices. er valuable co-operation could be l, strenuous efforts have been made re it. Schemes have been formulated pies forwarded to various governing At present the difficulties to contend are very great, as mere boys are now earn in temporary occupations more ey are likely to earn as adults in ordimployment. Much consideration and being given to the evils that will inevitise from present "dead-end" employn order to provide for a period when mbers of skilled and unskilled workmen needed for separate trades. To meet emergency the Council has endeavoured ecute its scheme to induce boys to apprentices and to encourage parents ake the immediate advantage of placing ns in occupations and in trades in which there is no profitable future. The present is not perhaps the precise time to introduce reforms, but it certainly is a time to prepare for the future and sow the seeds of a coming harvest. It therefore behoves all who are interested in the ultimate success of trade ventures to get things in readiness for future practical application. At the request of the Board of Trade Advisory Committee for Juvenile Employment a deputation waited upon that Committee and discussed the Institute of Builders' Apprenticeship Scheme, special emphasis being laid upon the necessity of technical school instruction and practical workshop experience being available for the craftsmen of the future. To further the interests of apprenticeship it has been decided to present annually a silver and a bronze medal to the most successful students of the City and Guilds of London Institute in our Overseas Dominions, Colonies, and Dependencies, in addition to the medals and money prizes now given to students in the United Kingdom. It has also been decided to award a silver medal each year—as a special prize for general efficiency in the theory and practice of building —to one of the students attending the Brixton L.C.C. Junior Day Schools who shall be recommended by the Brixton School of Building.

Form of Contract.—Some time has passed since this Institute approached the R.I.B.A. with a view to the formulation of an Agreed Form of Contract more in consonance with modern requirements than the form now in vogue, and to which even the R.I.B.A. itself has suggested certain amendments. At the request of the Practice Committee of the R.I.B.A., your President and Secretary, together with the President and Secretary of the National Federation of Building Trades Employers, attended a Conference upon the subject. It transpired that the R.I.B.A. has formulated a revised Form of Contract, the "draft" of which it has promised to forward, when ready, to the Institute for consideration. Some months have elapsed since this undertaking was given, but it has not yet been received. Efforts have been made by your Council to suspend any opposition that might be offered rather than take any action which might hamper the production of a revised form. Great patience has been shown, but in some parts of the country active steps have been taken to formulate, in conjunction with local governing bodies and architects, local forms for local use. Any step taken in providing an alternative Form of Contract is to be deeply regretted, in view of the fact that the Agreed Form has been and continues to be increasingly used, and it is to be hoped that when the revised document is submitted it will become mutually acceptable.

Sub-Contract.—A Special Committee has been appointed and is thoroughly taking up this matter in co-operation with the National Federation of Building Trades Employers, in conference with the London Master Builders' Association and representatives of sub-contractors' organisations, with the hope of producing a form that will be agreeable to all parties concerned. The different conditions under which sub-contractors in London and those in the provinces work is fully appreciated, and it has been suggested that two forms should be drawn up—one for sub-contractors to be appointed under Clause 19 of the Agreed Form of Contract and one for specialists and others under Clause 20. This action has been made necessary because the R.I.B.A. has declined to produce, authorise, or agree any form of sub-contract. Mr. W. H. Hope (solicitor, Sunderland) has been appointed legal adviser to the Joint Committee, and it is hoped that this Committee will very shortly be able to fully report the result of its deliberations.

Rise in Cost of Building Materials.—The rise in prices of building materials has been very marked since the commencement of the war, and is anticipated to further increase through the limitation to be placed on imports. From all over the country complaints of this have been received, but very little can be done to ameliorate the case under the circumstances. The rise seriously affects some contracts entered into before the war to which no easement has been obtained from architects and building owners. This is to be deeply regretted, as it involves contractors in serious loss.

Grants from the I.O.B. Benevolent Fund.—The following grants were made during the past year:—

1. Builders' Benevolent Institution	£50	0	0
2. Builders' Clerks' Benevolent Institution	10	10	0
3. Provident Institution of Builders' Foremen and Clerks of Works ..	10	10	0

Insurance against Risks from the King's Enemies.—Every attention has been given by the Council to the question of responsibility as to insurance against risks from the King's enemies in connection with pre-war contracts. Some building owners after considerable correspondence have agreed to bear the whole cost of the insurance premium. H.M. Office of Works have agreed to bear one-half the cost.

Timber Specification.—The R.I.B.A. forwarded a timber specification with the request for the Council's criticism. A Committee was appointed who, in conference with representatives of the Timber Trades' Federation, jointly amended its provisions and submitted these to the R.I.B.A. The R.I.B.A. writes to say that its Committee submitted its report to the Council, which decided to take no further action "as it is of opinion that, in consequence of conditions arising out of the war, the present time is not opportune for making regulations which in all probability could not now be carried into effect. It is proposed to resume consideration of the matter at the termination of the war."

The following elections were made :—

President—Mr. Leonard Horner (London).

Vice-President—Mr. Samuel Smethurst, J.P. (Oldham).

Treasurer—Sir Herbert H. Bartlett, Bt. (London).

Hon. Auditor—Mr. A. W. Sinclair, J.P. (Scarborough).

Executive Council :—Capt. R. J. Holliday (London), re-elected; Capt. F. M. May (London), re-elected; Mr. R. B. Chessum (London), elected; and Mr. Samuel Salter (Southsea), elected.

The Executive Council for 1916-17 consists of :—President, Mr. Leonard Horner (London); Vice-Presidents — Messrs. G. Bird Godson (London), Walter Lawrence (London), Edmond J. Hill (London), and Samuel Smethurst, J.P. (Oldham); Past - Presidents—Messrs. Frank May, J.P. (London), Thomas F. Rider (London), Sir Herbert H. Bartlett, Bt. (London), Mr. F. J. Dove (London), Sir John M. Burt, J.P. (London), Colonel G. M. Trollope (London), Messrs. Wm. Shepherd (London), Hy. Holloway, J.P. (London), Wm. F. King (London), Benjamin I. Greenwood (London), F. L. Dove, L.C.C. (London), Jas. Carmichael, J.P. (London), Wm. F. Wallis, J.P. (Maidstone), F. Higgs (London), James S. Holliday (London), H Arthur Bartlett (London), Ernest J. Brown (London), F. G. Rice (London), and Edward J. Strange (Tunbridge Wells); Ordinary Members of the Council—Messrs. R. B. Chessum (London), A. B. Falkner (London), F. J. Gayer (London), Capt. R. J. Holliday (London), Capt. F. M. May (London), Messrs. G. H. Parker (London), W. J. Renshaw (London), S. Salter (Southsea), H. P. Shepherd (London), F. Shingleton, M.V.O. (London), W. Thomas (Cardiff), and A. W. Turnbull (London).

A DECEASED BUILDER'S ESTATE.

The late Mr. John Bell, of Breeze Hill, Bootle, Lancs, builder and contractor, has left estate of the gross value of £67,922.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible or errors that *may* occur;—

——	Masons.	Brick-layers.	Car-penters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Masons' La-bourers.	Brick-layers' La-bourers.	Plas-terers' La-bourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7½	7½	7½
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	9½	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	9¾	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10½	10	10	8½	7½	7½	8
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	9½	10½	9	8½	8½	9
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	9½	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9½	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	10	8	10	8	7½	7½	7½
Worcester	8½	9½	9½	9	9	9	7½	6½	6½	6½
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s, per week granted. † War bonus of 3s. per week granted.

PROPOSED NEW BUILDI AND OTHER WORKS.*

In these lists care is taken to ensur accuracy of the information given, but i occasionally happen that, owing to bu owners taking the responsibility of comme work before plans are finally approved t local authorities, "proposed" works, a time of publication, have been actually menced. Abbreviations:—T.C. for Council; U.D.C. for Urban District Co R.D.C. for Rural District Council; E.(Education Committee; L.G.B. for Government Board; B.G. for Boar Guardians; L.C.C. for London County Co B.C. for Borough Council; and P.C. for I Council.

Accrington.—The T.C. has agreed to c proposed alterations and additions at the tricity works.

Aldershot.—The T.C. has approved pla proposed new premises in Wellington-stree High-street, for the Army and Navy Co-ope Society.

Bonnybridge.—An offer to erect, furnisl equip a nurses' home at Bonnybridge for t of Bonnybridge and District Nursing Asso from Lady Smith and family of Clifford Stirling, was accepted at the annual meet the association held recently.

Bradford.—The Street Improvement and ings Committee of the City Council recom the purchase from the Bradford Central E Company, Ltd., of strips of land situat Westgate, Rawson-road, Northgate, and street, for the sum of £5,000. It also pr the acceptance of tenders amounting to for the construction of a garage and petro at Dumb Mill. The Electricity Com recommends the installation of additional at Valley-road Works and the making of a tion to the L.G.B. for the necessary bor powers.

Broadstairs and St. Peter's.—The U.D. approved plans for proposed addition to Cottage, Lloyd-road, for Mr. E. R. Dunn.

Catterick.—Lady Cooke-Yarborough, of caster, has presented a site on her Ca Estate for the erection of a Y.M.C.A. hut cost of the hut is being provided by Mr. Moubray, of Catterick.

Chorley.—The T.C. has approved plans posed alterations at West Cottage, St. Tho road, for the executors of Mr. Cedric Ho and of proposed store at the Common Works, for the Chorley Bleaching Compan

Erith.—The Works and Town-planning mittee has instructed the Surveyor to sub scheme and estimate for the provision of slipper baths.

Flimwell.—Lord and Lady Goschen undertaken to restore and beautify the chu St. Augustine at Flimwell, on the bord Kent and Sussex.

Kidderminster.—Plans passed by the T Improvements at the Fish Inn, Orchard- for the Wolverhampton and Dudley Bre Ltd.; and extensions at the Royal Exc New-road, for the same firm.

Leeds.—The Improvements Committee authorised the demolition of the lodge junction of Roundhay-road and Harehill A new place of entertainment is to be erec the land close by, and it is part of a town ning scheme that the Roundhay-road fron point shall be widened. A beginning is n be made with this work.

Leyland.—At a recent meeting of the I plan of a proposed roof over a passage, f solid tyre department of Messrs. J. E. Ba Co., Ltd., at Golden Hill-lane, was app The Leyland Motors, Ltd., submitted a pl a proposed dining hall, etc., in Thurston-r

Longniddry.—About forty cottages are erected at Longniddry, on Lord Wemyss's for the accommodation of disabled so These houses are being put up in connectio the scheme promoted by the Scottish Vet Garden City Association.

Reading.—The T.C. has under consider a scheme for the erection of houses fo working classes.

Rosyth.—Plans were presented in Dunfe Dean of Guild Court recently by the S National Housing Company for 239 houses built at Rosyth. Plans were also passe certain roads and sewers in connection wi houses, which are estimated to cost be £60,000 and £70,000.

Selby.—The U.C. now proposes to bui additional hundred cottages, and allot 7 cent. of them to employees at the wor Barlow. Plans of thirty cottages have prepared as a commencement, the site to the Flaxley-road.

Shelley.—At a recent meeting of the U plans for alterations were presented for a c at Grice, Shelley, for Mr. C. P. Armitage

Westhoughton.—At a recent meeting Sanitary and Streets Committee the Su submitted plans and estimates for the pro of workmen's dwelling-houses. The schem passed by the committee. The land pr to be utilised for the scheme included the Fold site, the land around Alick Fold by the Council, and the Glebe land on the side of Lord-street.

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* See also our list of Competitions, Contract on page 288a.

R URGENT GOVERNMENT WORK, BOILERS,
DIATORS, TUBES, AND OTHER APPLIANCES
N BE SUPPLIED FROM OUR LONDON STOCK.

R BOOKLET ON MODERN HEATING
D HOT-WATER SUPPLY APPARATUS
ILL BE FORWARDED ON REQUEST.

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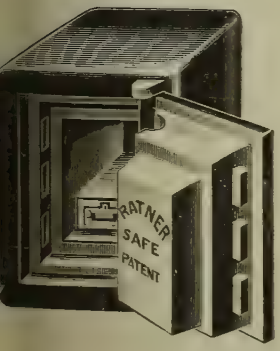
ROOFTITE
a high grade pure BITUMEN
ROOFING

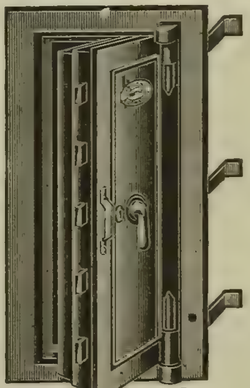
APPROVED BY WAR OFFICE. REQUIRES NO ANNUAL TOP DRESSING.

British Made at Kirkintilloch by
F. McNEILL & CO., Ltd.,
SPENCER HOUSE, 4, SOUTH PLACE, LONDON, E.C. *(Established, Bunhill Row, London, 1833.)*



RATNER
IMPROVED
SAFES & DOORS
Have Never Failed when Tested.

CATALOGUES FROM
51, MOORGATE ST., LONDON, E.C.



List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, —; Public Appointments, —; Auction Sales, xvi. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁎ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

APRIL 14.—**Cork.**—SUNDRY WORKS.—The Committee of Management of the South Charitable Infirmary and County Hospital invite tenders for executing sundry works at the nurses' quarters. Particulars from Mr. J. F. McMullen, architect, 30, South Mall, Cork.

APRIL 14. — **Liskeard.** — CLEANING, ETC.—The Guardians of Liskeard Union invite tenders for cleaning and colouring the walls, in part, of the workhouse infirmary. Specifications, etc., of the Master of the Workhouse.

APRIL 15.—**Auchterless.**—ADDITION.—For the mason, carpenter, slater, plaster, and plumber works of addition to dwelling-house, Mains of Hatton, Auchterless. Plans and specifications may be seen with the tenant and with Mr. W. L. Duncan, architect, Turriff.

APRIL 15. — **Glasgow.** — PAINTING. — For the cleaning and painter works required in the Western, Maryhill, and Southern Police Offices, etc., for the Corporation. Specifications, etc., at the Office of Public Works, 64, Cochrane-street.

APRIL 17.—**Dalton.**—HOUSE AND SHOP.—For the erection of house and shop, Briggate, Dalton. Plans, etc., of Messrs. Joseph Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

APRIL 17.—**Ebbw Vale.**—ALTERATIONS, ETC.—For proposed alterations and additions to the fire station, Ebbw Vale, for the U.D.C. Plan and specification may be seen and form of tender obtained on payment of £1 deposit in postal orders, at the office of Mr. T. J. Thomas, the Town Surveyor.

APRIL 17.—**Salford.**—EXTENSIONS.—For extensions to switch-house and foundations for same. Specifications, etc., from the Borough Electrical Engineer, Frederick-road, Pendleton.

APRIL 18.—**Derby.**—CLEANING AND PAINTING.—The directors of the Midland Railway Company invite tenders for cleaning and painting at various stations, etc. Specifications may be seen, quantities and particulars obtained, at the Engineer's Office, Derby Station.

APRIL 19.—**Keighley.**—HOSPITAL BUILDINGS.—For the erection of temporary hospital buildings, comprising two 100-bed blocks (180 ft. by 46 ft.), recreation hall, hospital supplies block, kitchen, offices, etc. Drawings, etc., of Messrs. Moore & Crabtree, architects, York-chambers, Keighley.

APRIL 22.—**Coleraine.**—VILLAS.—For building a pair of semi-detached villas at Upperlands Station, for Messrs. Wm. Clark & Sons, Ltd. Plans, etc., of the architects, Messrs. W. & M. Given, 6, Diamond, Coleraine.

APRIL 22.—**Lowca.**—HOUSES.—For the erection of two dwelling-houses in Stamford Hill-avenue, Lowca, for the Harrington Coke Ovens Company, Ltd. Plans and specifications can be seen at the office of Mr. Charles W. Eaglesfield, architect and surveyor, Gordon-street, Workington.

NO DATE. — **Ashington.** — STABLE, ETC. — For erection of a twelve-stalled stable, loose boxes, greengrocery warehouse, etc., for the Equitable Co-operative Society, Ltd., at Ashington. Names to Mr. Osborne Blythe, Licenciate R.I.B.A., architect, Ashington.

NO DATE.—**Dundalk.**—ALTERATIONS, ETC.—For alterations and repairs at Dundalk Methodist Church. Drawings, etc., by Mr. George F. Beckett, F.R.I.A.I., architect, 97, Stephen's-green, Dublin.

NO DATE.—**Inchinleamy.**—DWELLING-HOUSE.—For the building of dwelling-house at Inchinleamy. Plans, etc., from owner, Mr. Michael Wuirke, Jun., Inchinleamy, Ballydiff.

NO DATE.—**Newcastle-on-Tyne.**—NEW WORKS.—For the erection of new works. Specification and plans on application to Tyne Metal Company, Ltd., Skinnerburn-road, Newcastle-on-Tyne.

NO DATE. — **Nottingham.**—DEMOLITION.—The Trustees of the United Charities of Abel Collin invite tenders for the demolition of cottage property near Carrington-street, Nottingham. Particulars from Mr. Robert Evans, Surveyor to the Trustees, Eldon-chambers, Wheeler-gate, Nottingham.

FURNITURE, MATERIALS, etc.

APRIL 14.—**Glasgow.**—PAINTS, ETC.—Supply to the Corporation Sanitary Department, for one year of oils, paints, dry colours, etc. Specifications, etc., of Mr. Peter Fyfe, Chief Sanitary Inspector, 23, Montrose-street.

APRIL 15.—**Glasgow.**—MATERIALS.—Supply to the Corporation of builders' materials, etc., as may be required by the Water Department from June 1, 1916, for six or twelve months. Specifications, etc., of Mr. J. R. Sutherland, Water Engineer, 45, John-street.

APRIL 15.—**Neath.**—FURNITURE.—Supply to the Glamorganshire Joint Poor Law Establishment Committee of furniture, ironmongery, etc. Forms of tender of Mr. Wm. Spickett, Secretary to the Committee, Station-square, Pontypridd.

APRIL 15. — **Renfrewshire.** — PAINTS, ETC.—Supply to the Renfrewshire Combination Poorhouse for three, six, or twelve months, of paints and oils. Conditions of contract, etc., of Mr. Alex. Meikle, Secretary, Parish Council Office, Houston.

APRIL 26.—**Cork.**—PAINTS, ETC.—Supply to the Cork Harbour Commissioners of paints and oils, nails, screws, and files. Forms at the Engineer's Department, Harbour Commissioners' Offices, Custom House-street, Cork.

ENGINEERING, IRON, AND STEEL.

APRIL 15.—**Leeds.**—PIPES, ETC.—Supply to the Gas Committee of cast-iron pipes and retort castings. Specifications, etc., of Mr. W. B. Leech, General Manager, Gas Offices, Market Hall, Leeds.

APRIL 15.—**Manchester.**—PIPES, ETC.—Supply to the Corporation Waterworks Committee of about 330 tons of cast-iron hydraulic (high-pressure) pipes (6 in. and 5 in. diameter) and special castings. Specifications, etc., of the Secretary, Waterworks Offices, Town Hall, Manchester.

APRIL 17.—**Manchester.**—ELECTRICAL MATERIALS.—Supply to the Guardians of Manchester Union of electrical materials required at the Withington Institution, in connection with the additional electric lighting of the main side of the establishment. Particulars of the Acting Master at the Institution, Nell-lane, West Didsbury, Manchester.

APRIL 17 — **Salford.** — SWITCHGEAR.—For the supply and erection of three-phase extra high-pressure and low-pressure switchgear for 5,000 k.w. sub-station equipment, for the Electricity Department. Specifications, etc., from the Borough Electrical Engineer, Frederick-road, Salford.

APRIL 21.—**Leeds.**—MACHINERY.—The Guar invite tenders for supplying and fixing a cal in the workhouse laundry, Beckett-street, L Particulars of the Workhouse Master.

APRIL 25.—**Sheerness.**—PLANT.—The Sh R.D.C. invites tenders for the supply at S ness East Station of a cesspool emptying Mr. H. T. Copland, solicitor, Clerk o Sheppey R.D.C., Clerk's Office, Sheerness.

APRIL 27.—**Dublin.**—CARRIAGE UNDER-FRA The Great Northern Railway Company (Ire invite tenders for twelve steel carriage u frames, 58 ft. long. Copies of the specific etc., of the Secretary at Amiens-street Term Dublin. Deposit, 10s.

NO DATE.—**Blackwood.**—HEATING APPARAT For the installation of heating appa Names to Mr. A. F. Webb, M.S.A., arch Blackwood, Mon.

ROAD, SANITARY, AND WATE WORKS.

APRIL 15.—**Spennymoor.**—MATERIAL.—S to the U.D.C. of road material. Forn tender of Mr. C. R. Spencer, Surveyor t Council, Council Offices, Town Hall, Sp moor.

APRIL 17.—**Plymouth.**—MAKING-UP R For making-up and completing Bull Point St. Budeaux, for the Plymouth Corpor Plans, etc., of Mr. James Paton, Bo Engineer, Municipal Offices, Plymouth.

APRIL 19.—**Ashby-de-la-Zouch.**—GRANITE —Supply to the R.D.C. of granite or lim for the year ending March 31, 1917. Mr. Farmer, Clerk to the Council, Ashby-de-la-Z

APRIL 19.—**Haverhill.**—FILTER TANKS, The Guardians of the Risbridge Union tenders for the provision of filter tank sprinkler for the drainage works at Kedi Institution, near Haverhill, Suffolk. Plan specifications, by Mr. E. E. Oakes, Clare, S can be seen at the Kedington Institution, copy will be sent on receipt of remittance

APRIL 20.—**Troedyrhiw.**—STREET WORKS. certain street works at The Park, Troed for the Park Building Club, Troedyrhiw. etc., of Mr. David Davies, Pomera Troedyrhiw.

APRIL 24.—**Edinburgh.**— MATERIALS.— S to the Midlothian C.C. of road materia the year ending May 15, 1917. Schedu quantities, etc., at the Road Office, C Buildings, Edinburgh.

APRIL 26.—**Kent.**—RAG AND BLOCK ST Supply to the Justices and Commission Sewers for the limits extending from Gra Bridge to Sheerness, and thence along the Medway to Penshurst in Kent, of good rag free from hassock, and large block stones E. L. Baker, Clerk to the Commission, chambers, Rochester.

NO DATE.—**Newcastle.**—BOREHOLES.—Fo ing about sixteen test boreholes to an a depth of 50 ft. Particulars of Mr. L. G. Architect's Department, Co-operative Wh Society, Ltd., 90, Westmorland-road, Newc

Auction Sale.

* MAY 2.—**Epsom.**—Messrs. Debenham, son, & Chinnocks will sell by auction, Mart, a freehold residential and building

[Those with an asterisk (*) are advertised in this issue.]

ES CURRENT OF MATERIALS.

g to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

our last issue sheet lead, oils, and turps have duced.—Ed.

r aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest st. Quality and quantity obviously affect prices t which should be remembered by those who se of this information.

BRICKS, &c.

1,000 Alongside, in River Thames.	£	s.	d.
ocks	2	0	0
Stocks for Facings	2	12	0

1,000, Delivered at Railway Depôt, London.	£	s.	d.		£	s.	d.
s	1	10	0	Best Blue Pressed Staffordshire	5	0	0
areham	3	12	0	Do. Bullnose	5	5	0
ed Pressed on Facing	5	5	0	Best Stourbridge Fire Bricks	4	15	0
Bricks— White, and Glazed				D'ble Str'tch'rs	18	17	6
				Double Headers	15	17	6
chers	13	7	6	One Side and two Ends	19	17	6
s	12	17	6	Two Sides and one End	20	17	6
Bullnose 4½ in.	16	17	6	Splays and Squints	18	7	6

Second Quality £1 per 1,000 less than best.

	s.	d.	
s Ballast	7	9	per yard, delivered.
s and Pit Sand	8	0	,, ,,
ashed Sand	9	0	,, ,,

Per ton, delivered.

	£	s.	d.		£	s.	d.
rtland Cement	2	5	0	..	2	8	0

2 1s. alongside in 80-ton lots.

ete 2s. 6d. per ton extra on above.

round Blue Lias Lime.... 1 5 6 at rly. depôt.

—The cement or lime is exclusive of the ordinary charge for sacks.

tone Lime .... 18s. 0d. per yard delivered.

ridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
Stone — delivered in railway trucks at bourne Park, Paddington, G.W.R., or h Lambeth, G.W.R., per ft. cube	1	7
. delivered in railway trucks at Nine , L. & S.W.R., per ft. cube	1	8¼
. delivered on road waggons at Nine Elms t	1	9¼

and Stone—

	s.	d.
n Whitbed, in random blocks of 20 ft. erage, delivered in railway trucks at estbourne Park, G.W.R., South Lambeth, W.R., or Nine Elms, or L. & S.W.R. per ft. be	2	5½
do. delivered on road waggons at Pimlico hari or Nine Elms Depôt, per ft. cube	2	6½

e Basebed, 2d. per ft. cube extra.

m Blocks—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
er in blocks	2	0	Closeburn Red Freestone	2	2
blocks	1	7½	Red and White Mansfield Random block	2	9
ll in blocks	2	4	Yellow Magnesian Limestone do. do.	3	3
Dale in s	2	5			

Stone—*Robin Hood Quality.*

Ft. Cube, Delivered at Railway Depôt.	s.	d.
ed random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
awn two sides landings to sizes (under . super.)	2	5
bbed two sides ditto, ditto	2	8
wn two sides slabs (random sizes)	1	0½
2½ in. sawn one side slabs (random sizes)	0	8½
o 2 in. ditto, ditto	0	6¼

York—

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
ed random blocks	3	0
Per Ft. Super, Delivered at Railway Depôt.		
wn two sides landing to sizes (under 40 ft. r.)	2	3
bbed two sides ditto	2	7
wn two sides slabs (random sizes)	1	0
lf-faced random flags	0	5

TILES.

Per 1,000 f.o.r. London.

	£	s.	d.
achine-made tiles or hand-made sand- tiles from either Broseley or ordshire district	2	12	6
ental ditto	2	15	0
d valley tiles (per dozen)	0	5	6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

		£	s.	d.
lue Bangor slates,	20 by 10	11	16	0
uality ,,	,,	11	10	0
,,	16 by 8	5	15	0
lue Portmadoc,	20 by 10	11	13	6
uality ,,	,,	11	3	6
,,	16 by 8	5	15	0

WOOD.

ber prices should be confirmed, as the market is *changing daily.*

Building Redwood.

Imported sizes.	Per standard.						
	£	s.	d.		£	s.	d.
4 in. by 12 in., 4 in. 11 in., 3 in. by 11 in., in. by 9 in., and 2 in. 11 in.	33	10	0	..	34	10	0

WOOD (*Continued*).

Best Building Redwood.	Per standard.						
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32	10	0	..	33	10	0
Battens: 2 in., 2½ in., and 3 in. by 8 in.	31	10	0	..	32	10	0
2 in., 2½ in., and 3 in. by 7 in.							
2 in., 2½ in., and 3 in. by 6 in.							
2 in., 2½ in., and 3 in. by 5 in.							
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.							
3 in. by 4 in., and 3 in. by 4½ in.							
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0				
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.			
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube.						
	10	0	0	..	—		
Seconds do. do.	9	10	0	..	—		
9 in. to 10 in. do.	8	10	0	..	—		
6 in. to 8 in. do.	8	0	0	..	—		

Stocks very limited.

	Per load.						
Sawn pitch pine logs (about 35 cu. ft. average)	12	0	0	..	13	10	0
Do. 6 in. to 10 in.	10	0	0	..	11	0	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	10	0	..	7	0	0
	Per standard.						
Best Pitch Pine Deals	34	0	0	..	35	0	0
Under 2 in. thick	0	10	0		extra.		

Joiners' Wood.

White Sea Second Quality Red:							
4 in. by 11 in.	39	0	0	..	40	0	0
3 in. by 11 in. and 2 in, by 11 in.	38	0	0	..	39	0	0
4 in. by 9 in.	37	0	0	..	38	0	0
3 in. by 9 in. and 2½ in. by 9 in.	36	0	0	..	37	0	0
9 in. by 11 in. boards	1	0	0	more than deals.			
7 in. and 8 in. battens	33	0	0	..	34	0	0
7 in. and 8 in. boards	1	0	0	more than battens.			
Third quality	2	0	0	less than best.			
Fourth quality	£2 to £3			less than seconds.			
Archangel White Deals—							
Best 3 in. by 9 in. and 10 in. and 11 in.	36	0	0	..	37	0	0
Seconds, do.	2	0	0	less than best.			
U.S. Battens	30	0	0	..	32	0	0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.						
1¼ in. by 6½ in. planed and shot	1	16	0	..	1	19	0
1¼ in. by 6½ in. planed and matched	1	16	6	..	1	19	6
1 in. by 6½ in. planed and shot	1	9	0	..	1	12	0
1 in. by 6½ in. planed and matched	1	9	6	..	1	12	6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1	4	0	..	1	6	0
1 in. by 6½ in. do.	1	10	6	..	1	12	0
⅝ in. by 6½ in. do.	1	0	0	..	1	1	0

	Per standard.						
Columbian or Oregon Pine, best quality	42	0	0	..	44	0	0
Yellow Pine—First, regular sizes	57	0	0		upwards.		
Oddments	39	0	0		,,		
Seconds, regular sizes	43	10	0		,,		
Oddments	37	10	0		,,		
Kauri Pine—Planks per ft. cube	0	8	0	..	—		
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super., as inch	0	1	0	..	0	1	3
¾ in. do. no.	0	0	10	..	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch	0	1	0	..	0	1	4
Selected, Figury, per ft. super., as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	6	..	0	2	6
					upwards.		
Dry Walnut, American, per super., as inch	0	1	0	..	0	1	3
French, "Italian," Walnut	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton.						
	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	0	0	..	21	0	0
Plain Compound Girders, ordinary Sections	22	0	0	..	23	0	0
Plain Compound Stanchions	23	0	0	..	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	..	21	10	0
Flitch Plates	20	10	0	..	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	..	14	0	0

Turning extra.

METALS (*Continued*).

	Per ton, in London.						
Iron—	£	s.	d.		£	s.	d.
Common Bars	16	0	0	..	—		
Staffordshire Crown Bars, good merchant quality	16	0	0	..	17	0	0
Staffordshire "Marked Bars"	17	10	0	..	18	0	0
Mild Steel Bars	18	0	0	..	18	10	0
Steel Bars, Ferro-Concrete quality, £18 basis price.							
Hoop Iron, basis price	19	10	0	..	20	0	0
,, ,, Galvanised	30	0	0	..			
(*And upwards, according to size and gauge.)							
Sheet Iron Black—							
Ordinary sizes to 20 g.	19	10	0	..	20	0	0
,, ,, 24 g.	20	10	0	..	21	0	0
,, ,, 26 g.	21	10	0	..	22	0	0
Sheet Iron, Galvanised flat, ordinary quality—							
Ordinary sizes. 6 ft. by 2 ft. to 3 ft. to 20 g.	30	0	0	..	—		
Ordinary sizes to 22 g. and 24 g.	30	10	0	..	—		
Ordinary sizes to 26 g.	33	0	0	..	—		
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	31	0	0	..	—		
,, ,, 22 g. and 24 g.	31	10	0	..	—		
Ordinary sizes to 26 g.	34	10	0	..	—		
Galvanised Corrugated Sheets—							
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29	0	0	..	—		
Ordinary sizes, 22 g. & 24 g.	29	10	0	..	—		
Ordinary sizes, 26 g.	30	0	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20	10	0	..	—		
Best Soft Steel Sheets, 22 g. and 24 g.	20	15	0	..	—		
Best Soft Steel Sheets, 26 g.	22	10	0	..	—		
Cut Nails, 3 in. to 6 in.	21	10	0	..	22	0	0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£	s.	d.		
Lead—Sheet, English, 4 lb. and up		40	10	0	..	—
Pipe in coils		41	0	0	..	—
Soil pipe		44	0	0	..	—
Compo pipe		44	0	0	..	—

Note—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.		
Copper—						
Strong Sheet	per lb.	0	1	5	..	—
Thin ,,	,,	0	1	6	..	—
Copper nails	,,	0	1	5	..	—
Copper wire	,,	0	1	5	..	—
Brass—						
Strong Sheet	,,	0	1	3	..	—
Thin ,,	,,	0	1	4	..	—
Tin—English Ingots	,,	0	2	0	..	—
Solder—Plumbers'	,,	0	0	11	..	—
Tinmen's	,,	0	1	2	..	—
Blowpipe	,,	0	1	4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
,, fourths	4¾d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral, white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¾d.

OILS, &c.

		£	s.	d
Raw Linseed Oil in pipes	per gallon	0	3	5
,, ,, ,, in barrels	,,	0	3	6
,, ,, ,, in drums	,,	0	3	9
Boiled ,, ,, in barrels	,,	0	3	8
,, ,, ,, in drums	,,	0	4	0
Turpentine in barrels	,,	0	4	0
,, in drums	,,	0	4	3
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	54	0	0
Red Lead, Dry	per ton	56	0	0
Best Linseed Oil Putty	per cwt.	0	11	0
Stockholm Tar	per barrel	1	12	0
Genuine White Lead Paint— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots	per ton delivered	66	0	0

VARNISHES, &c.

	Per gallon.		
	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

TRADE NEWS.

Boyle's latest patent "air-pump" ventilators have been adopted for the offices of the Scottish Legal Life Assurance Company, Virginia-street, Glasgow.

We have been informed that a concrete reservoir containing brine was built two years ago at Droitwich, the powder Pudlo being used to waterproof the cement. A recent report states that it is still quite leakproof.

The Halstead Isolation Hospital is being supplied with Shorland's warm-air ventilating patent Manchester stoves, with descending smoke flues and special inlet ventilators, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

We have recently received samples of "Coatostone" (liquid stone), which, laid on with a brush, gives the effect of natural stone when applied to plaster, cement, wood, or other surfaces. It is supplied to imitate any well-known building stones or to any tint desired. It will not injure brushes, and can be used like ordinary paint, laid off evenly and stippled. It can be applied to old cement stucco or terra-cotta fronts, which are thus made to resemble stone, and generally it is a very useful material for producing the effect of actual stone. The rights in the name "Coatostone," together with the goodwill of the business of the "Coatostone Decoration Company," were acquired some time ago by the Stone Preservation Company, Ltd., 9A, Little James-street, Gray's Inn, London, W.C.

In view of the embargo placed upon paper, both as regards price and output, our attention has been called to the wall lining "Fiberlic," which is a building or wall board of considerable hardness and rigidity. It requires no papering, and one or two coats of oil paint or distemper will give a very pleasing effect. The monotony of an unbroken wall, which is sometimes the objection with distempered plaster walls, is relieved with thin moulding strips which are used to cover the joints where the sheets meet. The "Fiberlic" Board is manufactured by Messrs. MacAndrews & Forbes, Ltd., Finsbury-court, Finsbury-pavement, E.C., who will send to any interested reader schemes for panelling according to the size and kind of room. The board is fire-resisting, sanitary, vermin-proof, odourless, and it is also a non-conductor of heat, cold, and sound.

TENDERS.

GOOD FRIDAY WEEK.—In consequence of the Easter holidays, we go to press a day earlier than usual next week, the *Builder* being published on Thursday. All communications must reach the Editor by *first post on Tuesday morning*.

* Denotes *accepted*. † Denotes *provisionally accepted*.

BOURNEMOUTH.—Accepted by the Borough Council for the supply of coarse or rough gravel for the year ending March 31, 1917 :—

Coarse binding gravel, delivered to Central District, 6s. 4d. per cube yard; East District, 6s. 11d.; West District, 5s. 6d.; and North District, 5s. 6d.—G. Maidment.

Coarse gravel, delivered to Central District, 5s. per cube yard; East District, 7s.; and North District, 4s. 6d.—J. Francis.

Coarse gravel, delivered to West District, 5s. 6d. per cube yard—G. Maidment.

BOURNEMOUTH.—Accepted by the Borough Council for the supply of fine gravel and nut gravel, for the year ending March 31, 1917 :—

Fine gravel, delivered to Central District, 4s. 9d. per cube yard; East District, 5s. 6d.; West District, 4s.; and North District, 4s. Nut gravel, delivered to Central District, 6s. 6d. per cube yard; East District, 6s. 11d.; West District, 6s.; and North District, 6s.—G. Maidment.

DUDLEY.—Accepted for 300 houses in connection with the housing scheme. Mr. John Gammage, C.E., Borough Surveyor :—

W. Roe, Wolverhampton, for thirty houses; T. Higgs, Northampton, for fifty-four houses; Jenkins & Davies, Rhondda, for forty houses; Rogers & Son, Cardiff, for eighty-six houses; Dudley Amalgamated Builders, for ninety houses—total, 300 houses.

GRASSINGTON.—For the erection of a new branch shop at Grassington, for the Skipton Co-operative Society, Ltd. Mr. James Hartley, architect, Skipton :—

T. T. Chapman, Bowers-yard, Skipton; W. V. Patrick, Grassington, near Skipton; F. Bayley, Grassington, near Skipton; G. H. Mason & Sons, plumbers, Skipton; A. Shuttleworth, Water-street, Skipton. Total, £1,100.

TONYPANDY.—For alterations, etc., to Nos. 62 and 63, Dunraven-street, Tonypandy. Mr. E. I. Evans, architect, Tonypandy :—

E. R. Evans Bros.	£498	10
W. Spratt	458	0
T. Lewis	451	7
J. Thomas	450	0
J. Lovatt, Penygraig, Rhondda*	415	0

SUNBURY-ON-THAMES.—For supplying to Urban District Council of not less than 250 t of granite; also 200 tons of slag tar-macad. Mr. H. F. Coales, A.M.Inst.C.E., Surveyor :—

Granite : J. Mowlem & Co., Ltd., 21s. 6d. per t British Macadams, Ltd., 21s. 1d.; W. Griff & Co., Ltd., 18s. 9d.; Rowe & Mitchell, 18s. Brooks, Ltd., 18s.; Ellis & Everard, 16s. H. L. Cooper & Co., 15s. 11d.; Abdon Clee St Co., Bridgnorth, 15s. 11d.*

Slag tar-macadam : Constable, Hart, & Co., 17s. and 18s. 9d.; J. Oakes & Co., 18s. and 18s.; Prestwich & Sons, 18s. and 18s.; J. Wainwr & Co., Ltd., 17s. 8d. and 17s. 11d.; H. L. Co & Co., 17s. 4d. and 17s. 4d.; Tarmac, I Ettingshall, 17s. 3d. and 17s. 9d.*

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TO CORRESPONDENTS.

NOTE.—All communications with respect to lite and artistic matters should be addressed to " EDITOR" (and not to any person by name); t relating to advertisements and other exclusively bus matters should be addressed to THE BUILDER L and *not* to the Editor.

All communications must be authenticated by name and address of the sender, whether for public or not. No notice can be taken of anony communications.

The responsibility of signed articles, letters, papers read at meetings rests, of course, with the aut

We cannot undertake to return rejected commu tions; and the Editor cannot be responsible for draw photographs, manuscripts, or other documents, o models or samples sent to or left at this office, u he has specially asked for them.

All drawings sent to or left at this office for consi tion should bear the owner's name and addres either the face or back of the drawing. Delay inconvenience may result from inattention to this

Any commission to a contributor to write an ar or to execute or lend a drawing for publication, is subject to the approval of the article or drawing. received, by the Editor, who retains the right to it if unsatisfactory. The receipt by the author proof of an article in type does not necessarily imp acceptance.

N.B.—Illustrations of the First Premiated Desi any important architectural competition will alwa accepted for publication by the Editor, whether have been formally asked for or not.

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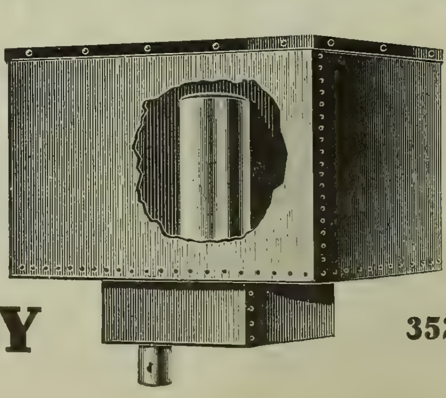

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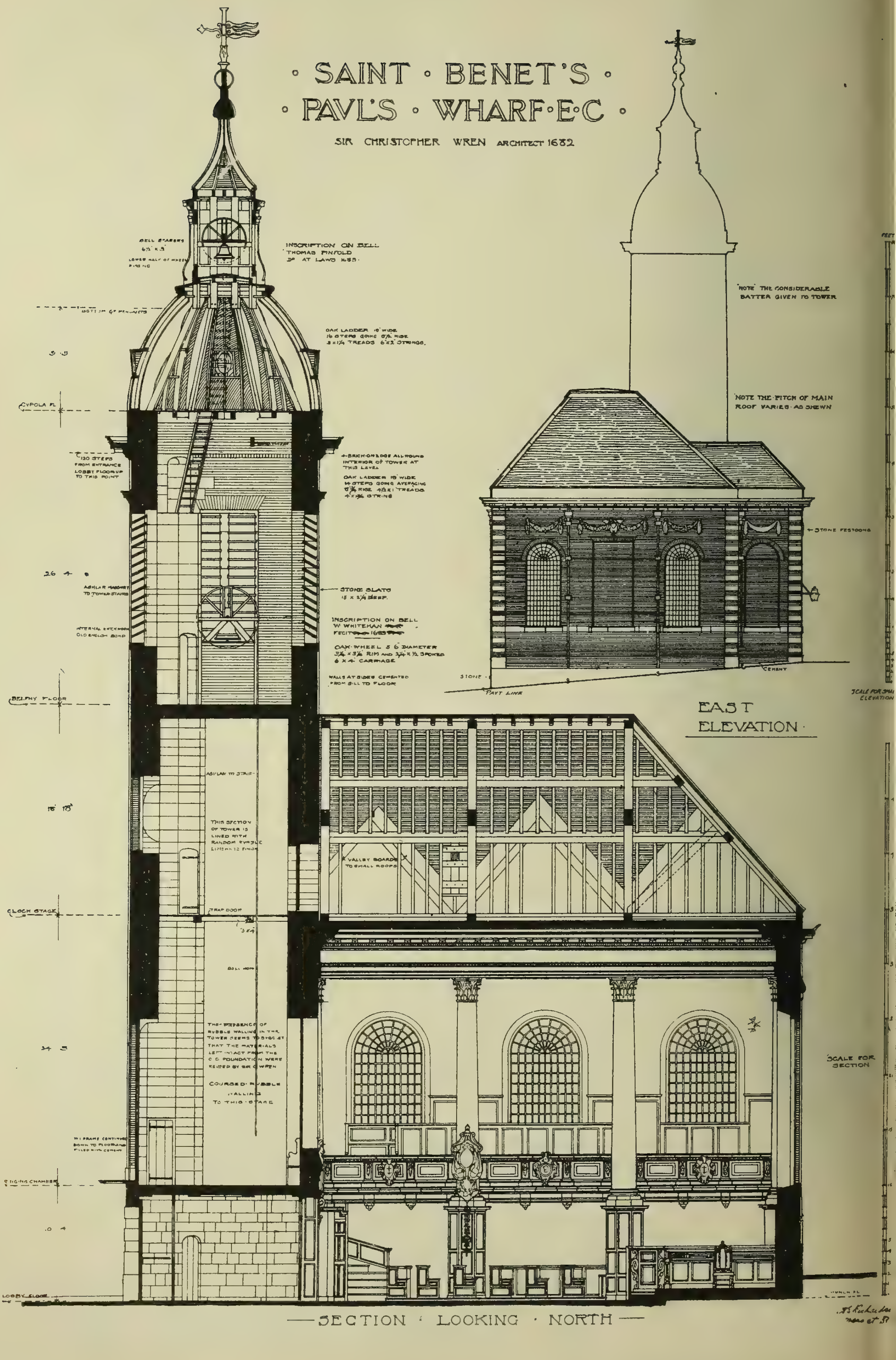
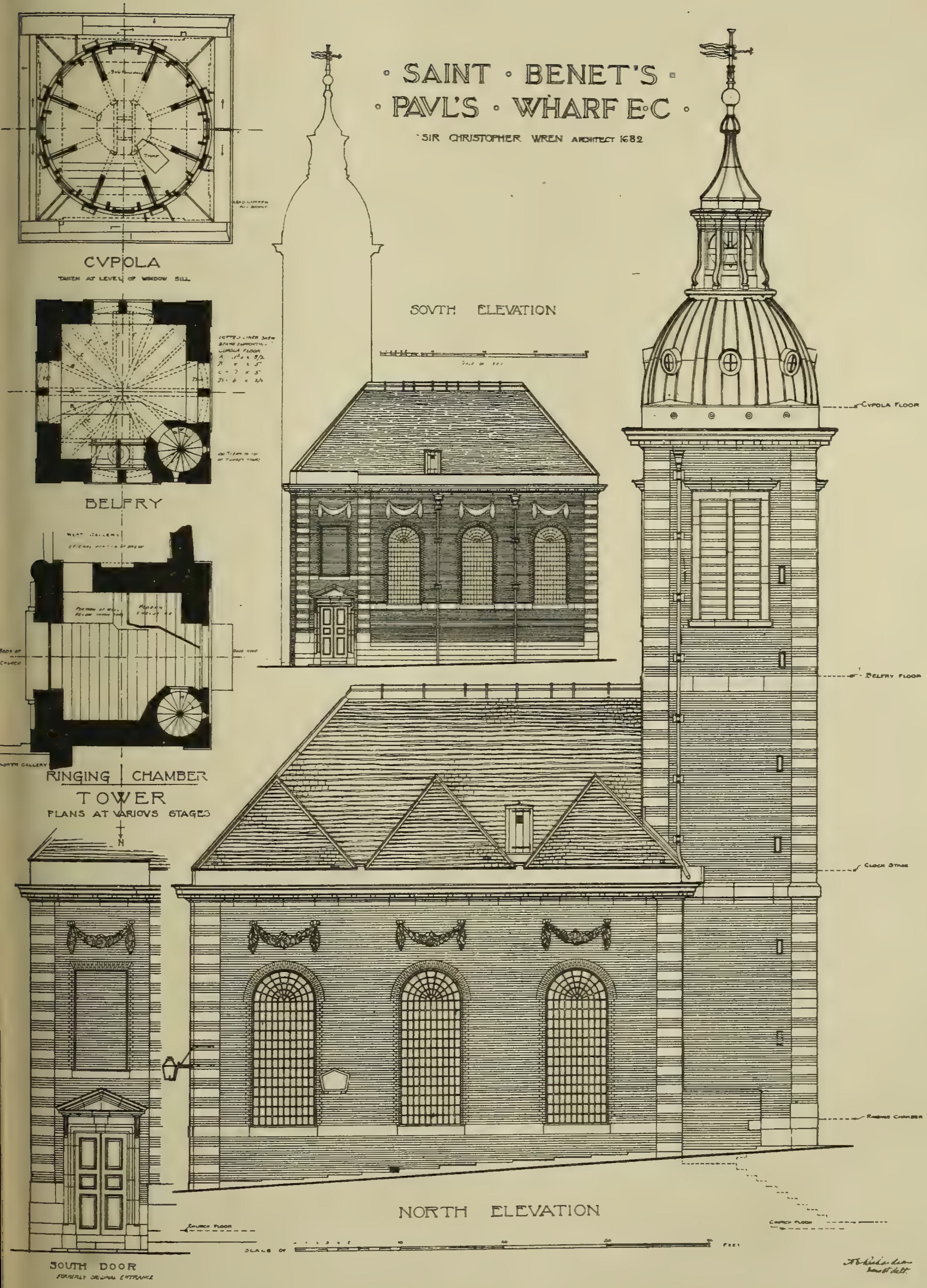
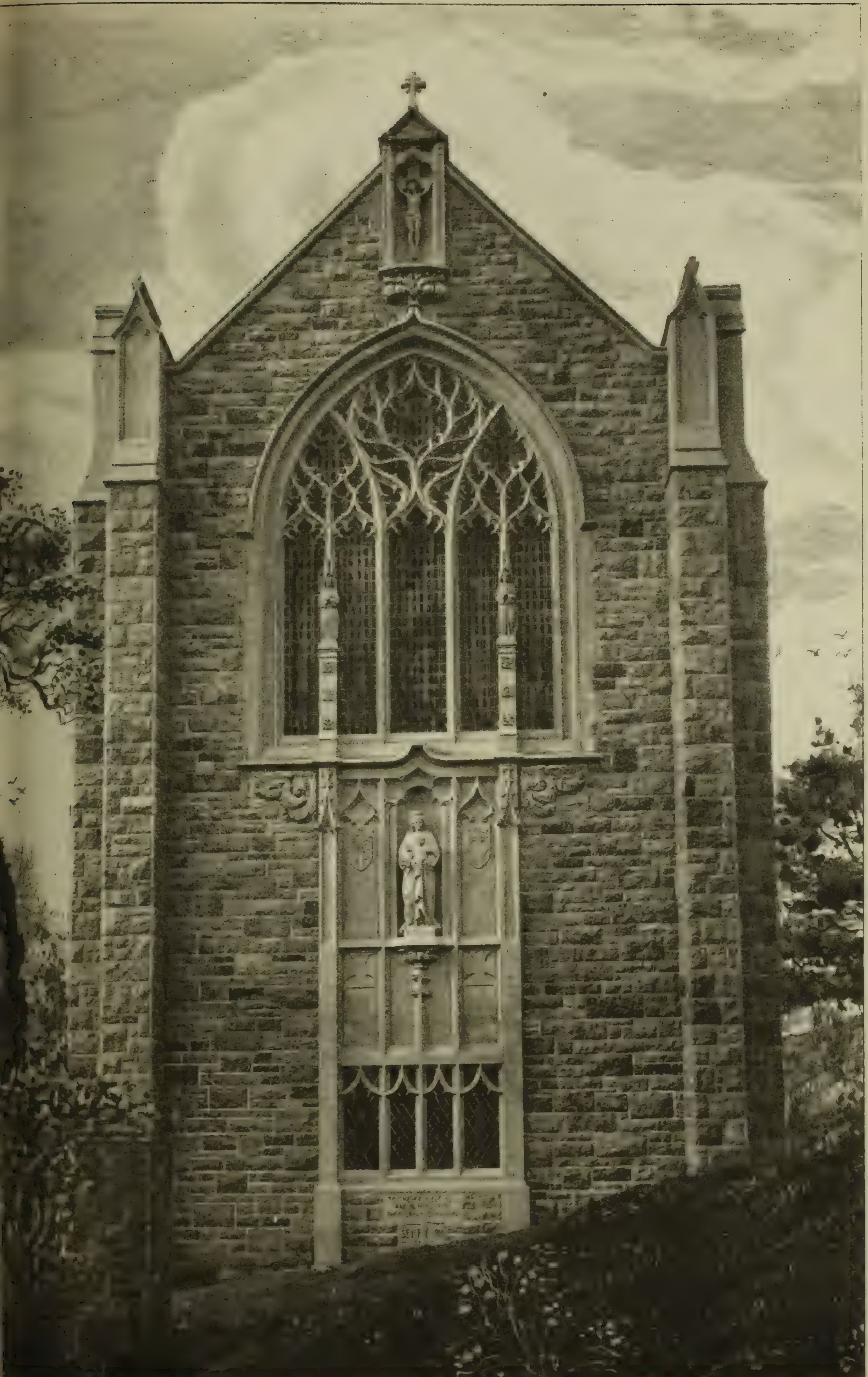
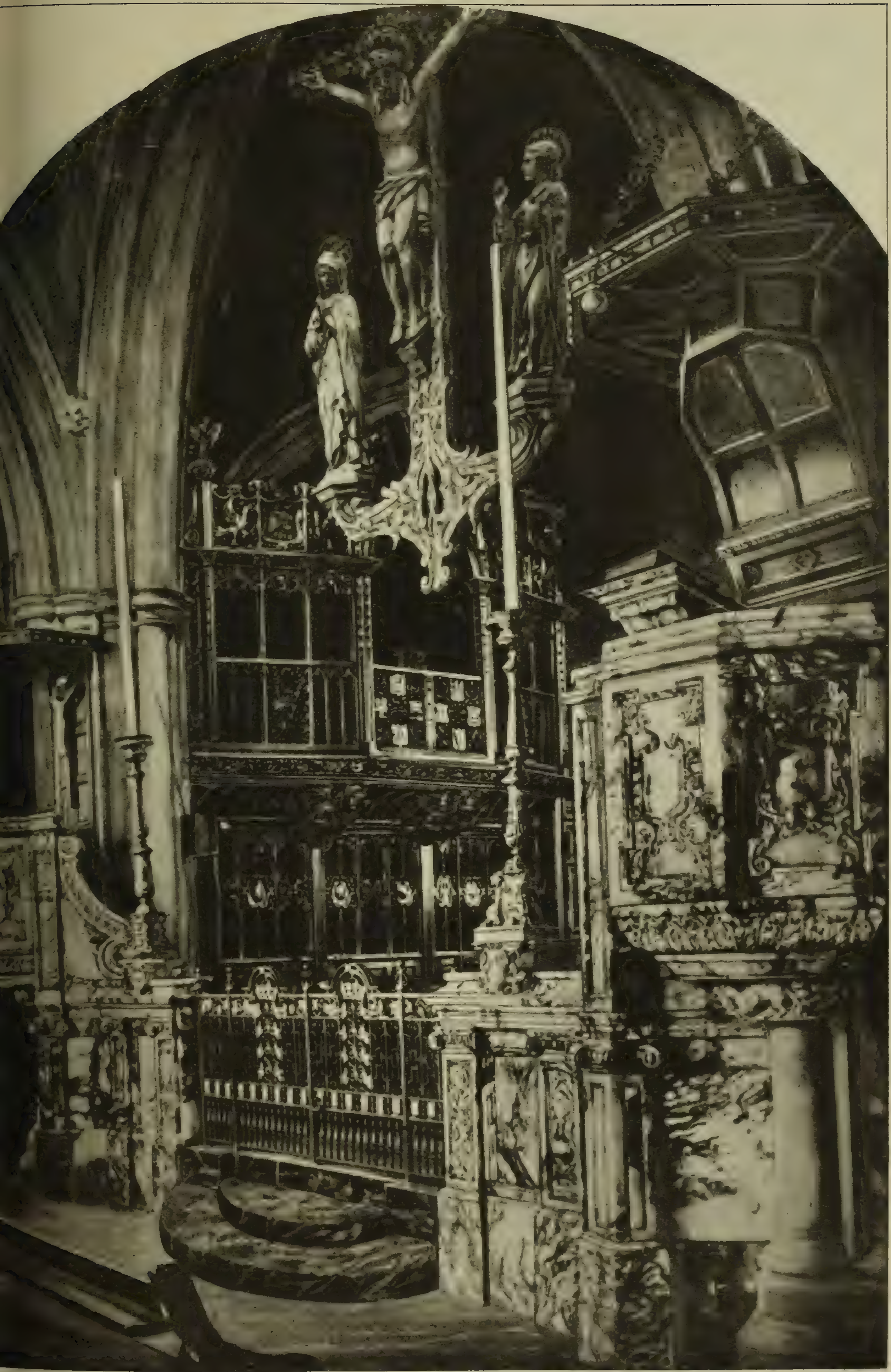
SIR CHRISTOPHER WREN ARCHITECT 1682


BELL STARERS 6½ x 3
LOWER HALF OF WHEEL FIXING
INSCRIPTION ON BELL THOMAS PINFOLD Dº AT LAWS 1685
BOTTOM OF PENNANTS
OAK LADDER 10" WIDE 16 STEPS GOING 8½ RISE 3 x 1¼ TREADS 6 x 2 STRINGS.
9 . 9
CUPOLA FL
120 STEPS FROM ENTRANCE LOBBY FLOOR UP TO THIS POINT
4-BRICK-ON-EDGE ALL ROUND INTERIOR OF TOWER AT THIS LEVEL
OAK LADDER 16" WIDE 14 STEPS GOING AVERAGING 8¾ RISE 4½ x 1 TREADS 4 x 1¾ STRING
26 4
ASHLAR MASONRY TO TOWER STAIRS
STONE SLATS 15 x 2¼ DEEP.
INTERNAL BRICKWORK OLD ENGLISH BOND
INSCRIPTION ON BELL W WHITEMAN FECIT 1683
OAK WHEEL 5 6 DIAMETER 3¼ x 3¼ RIM AND 2¼ x ½ SPOKES 6 x 4 CARRIAGE
WALLS AT SIDES CEMENTED FROM SILL TO FLOOR
BELFRY FLOOR
ASHLAR TO STAIR
16 10
THIS SECTION OF TOWER IS LINED WITH RANDOM RUBBLE LIMEWASH TO FINISH
VALLEY BOARDS TO SMALL ROOFS
CLOCK STAGE
TRAP DOOR
3 x 4
BELL ROPE
THE PRESENCE OF RUBBLE WALLING IN THE TOWER SEEMS TO SUGGEST THAT THE MATERIALS LEFT INTACT FROM THE O. C. FOUNDATION WERE SEIZED BY SIR C. WREN
COURSED RUBBLE WALLING TO THIS STAGE
34 5
W.I. FRAME CONTINUED DOWN TO FLOOR AND FILLED WITH CEMENT
RINGING CHAMBER
10 4
LOBBY FLOOR
CHURCH FL
NOTE THE CONSIDERABLE BATTER GIVEN TO TOWER
NOTE THE PITCH OF MAIN ROOF VARIES AS SHEWN
STONE FESTOONS
STONE
CEMENT
PAVT LINE
EAST ELEVATION
SCALE FOR SMALL ELEVATION
FEET
SCALE FOR SECTION
SECTION · LOOKING · NORTH
J. S. Richardson meas et del

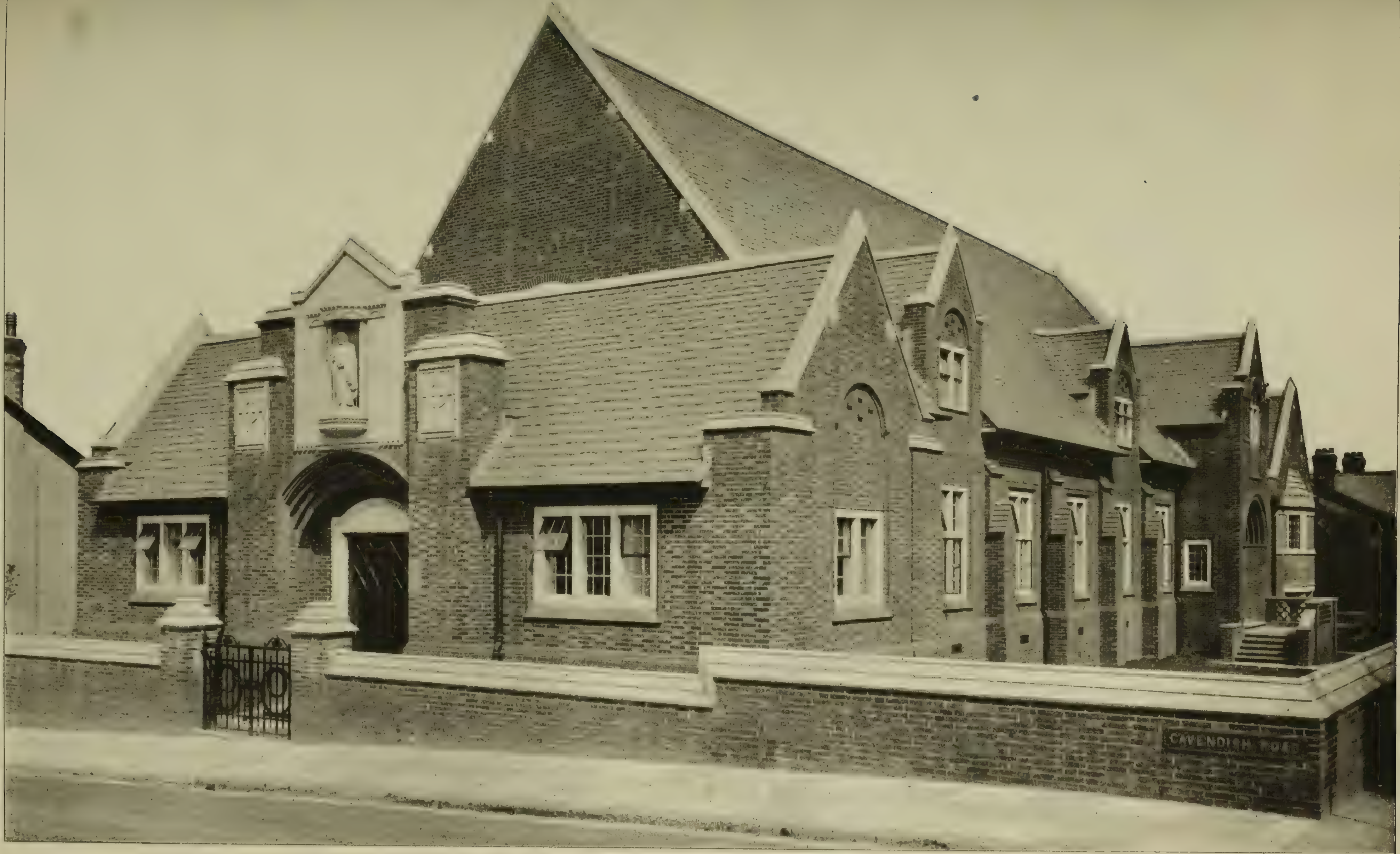

SAINT · BENET'S
· PAVL'S · WHARF E·C ·
SIR CHRISTOPHER WREN ARCHITECT 1682
CVPOLA
TAKEN AT LEVEL OF WINDOW SILL
BELFRY
RINGING CHAMBER
NORTH GALLERY
BODY OF CHURCH
TOWER
PLANS AT VARIOVS STAGES
N
SOVTH ELEVATION
CUPOLA FLOOR
BELFRY FLOOR
CLOCK STAGE
RINGING CHAMBER
CHURCH FLOOR
NORTH ELEVATION
SCALE OF FEET
10
20
30
SOUTH DOOR
FORMERLY ORIGINAL ENTRANCE



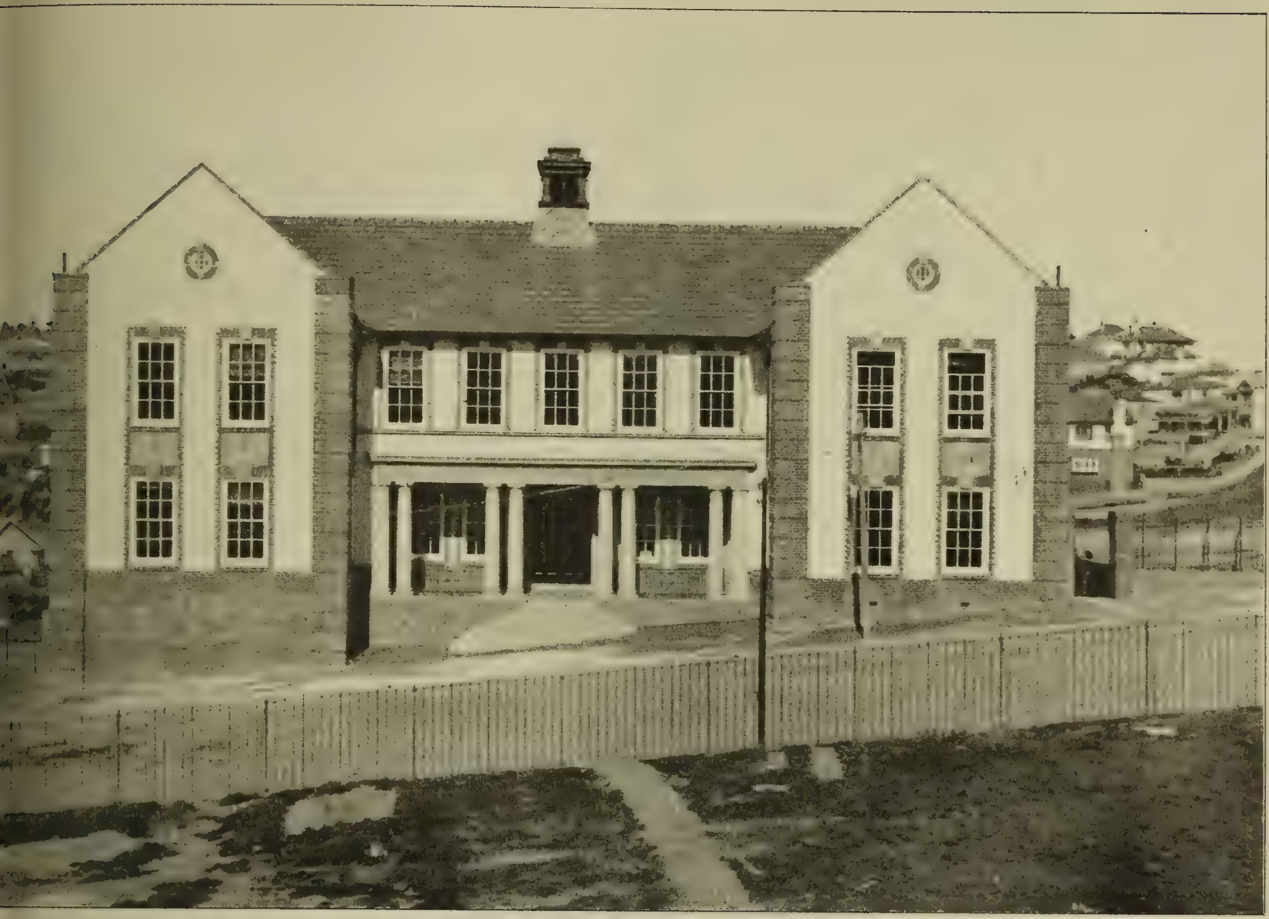
ST. MARY-THE-VIRGIN, LAIRA, PLYMOUTH: EAST END.—MR. T. R. KITSELL, ARCHITECT.

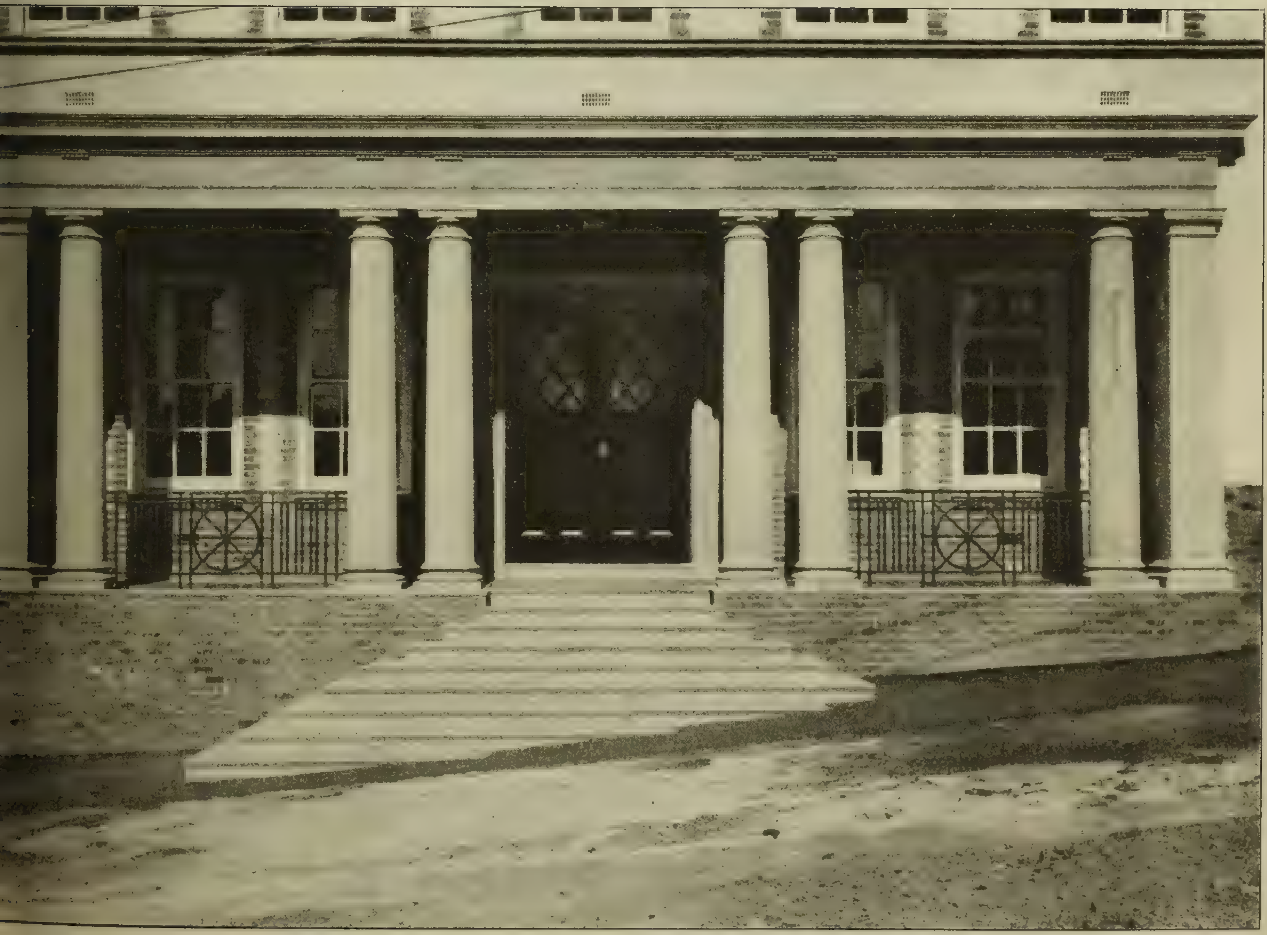


CHANCEL OF ST. JAMES-THE-LESS, PLYMOUTH.—MR. T. R. KITSELL, ARCHITECT.



PARISH HALL, NEW BRIGHTON, CHESHIRE.—MR. E. GUY DAWBER, F.R.I.B.A., ARCHITECT.





TRAINING COLLEGE, WELLINGTON, NEW ZEALAND.—MR. W. GRAY YOUNG, ARCHITECT.

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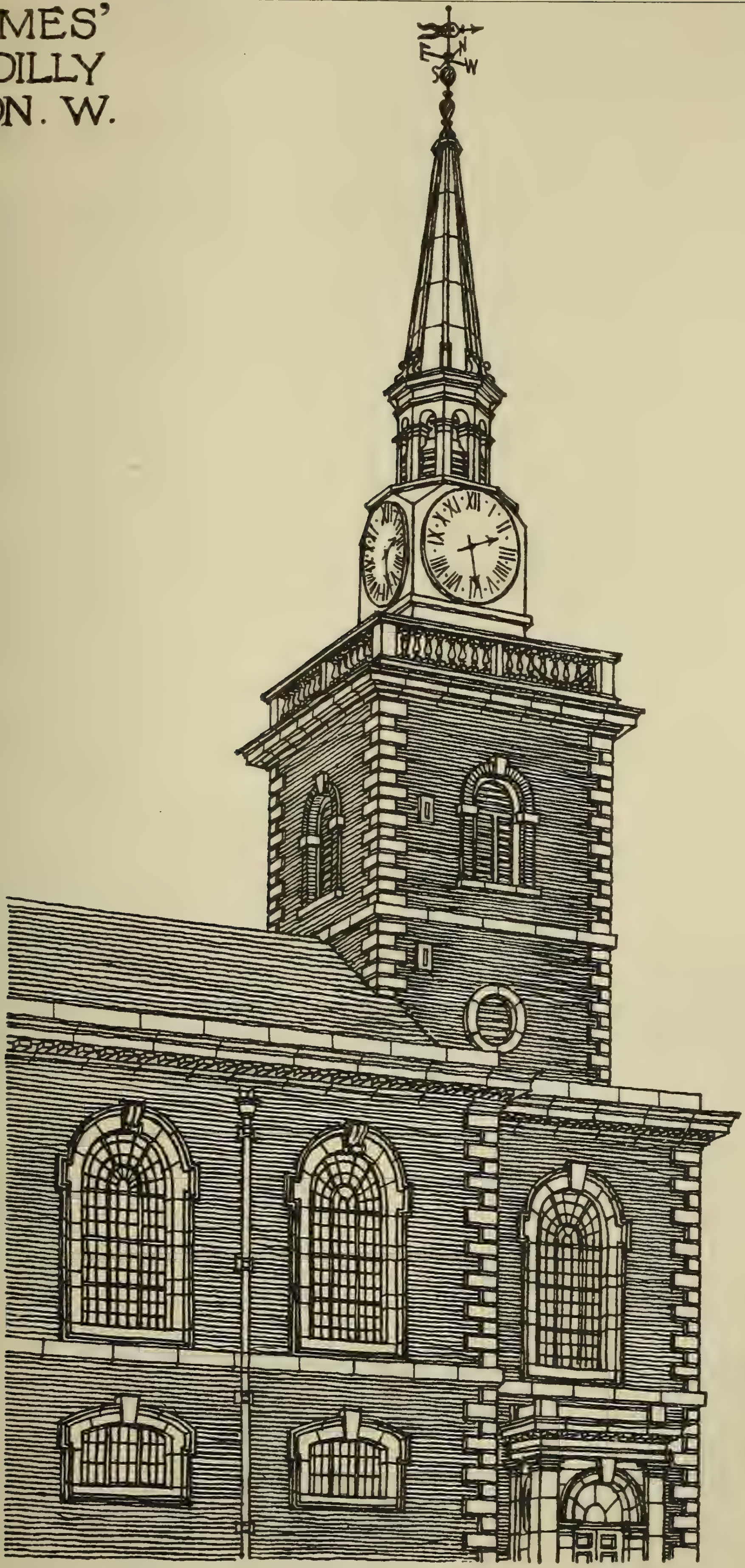
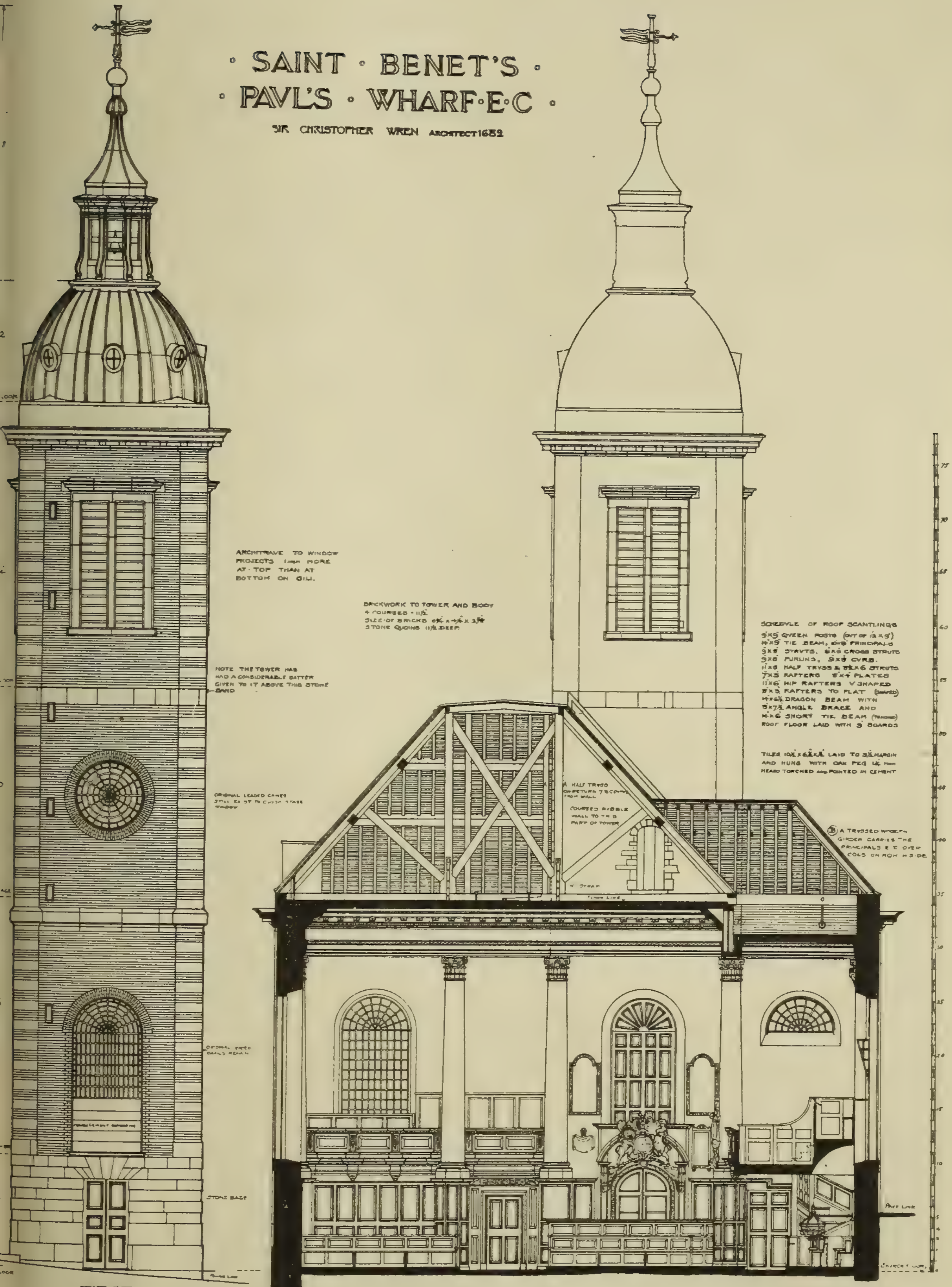
PICCADILLY
LONDON. W.



C. Harrold Norton. del:

SAINT BENET'S PAVL'S WHARF E.C.

SIR CHRISTOPHER WREN ARCHITECT 1682


ARCHITRAVE TO WINDOW PROJECTS 1 INCH MORE AT TOP THAN AT BOTTOM ON SILL.
BRICKWORK TO TOWER AND BODY 4 COURSES = 11½
SIZE OF BRICKS 8¾ x 4⅛ x 2¼
STONE QUOINS 11½ DEEP
NOTE THE TOWER HAS HAD A CONSIDERABLE BATTER GIVEN TO IT ABOVE THIS STONE BAND
ORIGINAL LEADED CAMES STILL EXIST TO CLOCK STAGE WINDOW
ORIGINAL PAVED CAMES REMAIN
STONE BASE
SCHEDULE OF ROOF SCANTLINGS
9x9 QUEEN POSTS (OUT OF 13x9)
14x9 TIE BEAM, 8x9 PRINCIPALS
9x8 STRUTS, 8x8 CROSS STRUTS
9x6 PURLINS, 5x8 CURB.
11x8 HALF TRUSS & 8x6 STRUTS
7x5 RAFTERS 8x4 PLATES
11x6 HIP RAFTERS V SHAPED
8x5 RAFTERS TO FLAT (SHAPED)
14x6½ DRAGON BEAM WITH
5x7½ ANGLE BRACE AND
14x6 SHORT TIE BEAM (TENONED)
ROOF FLOOR LAID WITH 3 BOARDS
TILES 10½ x 6¼ x ½ LAID TO 3¼ MARGIN AND HUNG WITH OAK PEG 1¼ FROM HEAD TORCHED AND POINTED IN CEMENT
A HALF TRUSS ON RETURN 7 8 CENTRE FROM WALL
COURSED RUBBLE WALL TO THIS PART OF TOWER
STRAP
FLOOR LINE
A TRUSSED WOODEN GIRDER CARRIES THE PRINCIPALS &c OVER COLS ON NORTH SIDE
PATH LINE
CHURCH FLOOR
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5

WEST ELEVATION · OF TOWER

SECTION LOOKING · WEST

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

DL. CX.—No. 3820.

APRIL 21, 1916.

THE RAILWAY-STATIONS OF LONDON.

T is doubtful whether the average citizen bestows more than a casual glance upon the architecture of the terminus of his particular line of railway, much less is he familiar with the character of the whole class. For Londoners have come to accept the metropolitan ini with easy tolerance, notwithstanding their utilitarian ty and ugliness. In a vague kind of way those who ent the stations realise the brutal driving force of the strial age which called them into being, and consider such lings to be mere engineering blemishes on the body of lon, softened to an imperceptible degree by the machina- of Soot, Fog, Gas Coal, and Company. Yet these gency exits to the outer world have a charm entirely own. It rouses the imagination to think of the steel enmeshing the fair counties of England, bringing distant within a few hours' swift journey; moreover it is uraging to peep behind the scenes at the panting es that have brought in trains from the Continent or rica. To visit the representative stations would need a leisure, and if we desired to subject each terminal to al analysis a week of strenuous labour would not be ient. We can, however, conduct a flying tour from the hs of an easy-chair, skim a mass of unintelligible and statistics, and devote our thoughts solely to the -comic aspect of the issue. A start can be made upon doyen of the band, Euston. In a chronological sense on is the oldest and the most important; its adamantine vay—a monument by Hardwick, symbolising the linking of ingham to London in the first years of Victoria's reign— s even to-day the look of a Gulliver fearful of crushing Lilliputians.

he original name of the London and Birmingham Railway ong since been swallowed up by the ramifications of the lon and North-Western system, an apt modern rendering e Biblical story of Aaron's rod.

uston is a secret labyrinth from whence travellers are ted off in a mysterious way. The hall, with its range of columns, is strangely Eleusinian; even the officiating ts are doubtful of some of the passages, and to find the en platforms denotes an intelligence of a very superior order. hard to realise that such a heterogeneous growth of train s, stores, and offices heads one of the most scientifically nised railways in the world. Euston as a railway puzzle teresting and entertaining for its human flavour, but it t a civic monument like the Gare du Nord in Paris.

wo miles away stands Paddington, with its breezy air of West Country. It is a structure resembling the hoops of inoline. The hotel, garbed by Hardwick in Victorian an fashion, with a clasp brooch of Baroque design as its jewel, tries to screen the crinoline skeleton, but latterly her hoop has been added to accommodate the expanding e of the elderly lady. Brunel designed the iron roof in us Oriental taste and stamped his personality on the place. immortalised it, and every day the incidents of the famous re are re-enacted.

n the days of the "railway mania" Waterloo was a us rival to Paddington; what is to be said for it in the es of reconstruction? The new structure is certainly open spacious, the plan reflects a continental interest, but it s the smoky charm of yesterday.

aterloo is a military and naval station as befits its opriate name; it is enormous, and large enough in fact to mmodate an army corps. The architecture of Waterloo, ts second youth, defies analysis. The train sheds are utilitarian, but the refreshment-rooms are luxuriant, and that is all that can be said for it.

For a more glaring example of British incompetence in these matters we can visit the twin stations at Victoria. Oh, that the shade of Pugin could revisit London and edit a new volume of Contrasts, the frontispiece would certainly be the façades of Victoria! Having risked our limbs in a perfect whirlpool of motor traffic, we reach the station-yard and find two buildings joined like Siamese twins in painful solemnity. Neither has the least sympathy for its neighbour, and both express discontent at the lordly insolence of the Grosvenor Hotel, which refuses to recognise the existence of the usurpers. Passing through to the terminus of the Brighton line, we find the longest platforms in England, interminable in perspective, with Clapham Junction at their southern extremity. The western rampart to the station is interesting as a blank wall, but it leaves the enclosure of the South-Eastern and Chatham line to chance. We depart from the twin abortions of Victoria with a feeling of depression and make for Charing Cross.

Here a further surprise awaits us, for it comes as a shock even to those with a knowledge of London to find a terminus thirty seconds from Nelson's Column. How the railway magnates of the mid-Victorian age must have chortled when they secured the demolition of Hungerford Bridge and Market, and how conceited they were to attempt to span the Thames with an economical centipede bridge and to cloak their doings with a nondescript hotel! The promoters of this monstrous scheme evidently feared public censure, for they threw a sop to the Gothic Cerberus by manufacturing a pseudo-mediæval cross, and so found a name for their station. Having broken into London in the west, the directors of those days used the same plans for the bridge and hotel at Cannon-street, only the cross was omitted.

Just across the river Mocatta's Italian rendering of a station façade is buried in a forest of additions. London Bridge recalls a nightmare or troublesome dream. The timorous passenger is faced with impossible approaches, tortuous bridges, fearsome alley-ways, and cavernous entries. The *tout ensemble* is indescribable, and with its crudity is a self-accusing monument to the exigencies of commercial necessity. London Bridge never appears to us in any other light than being an appanage to some greater terminus, an enlarged and more terrible version of a New Cross or a Croydon, which has crept as near the Thames as it dared, and then, fearful of discovery, has fortified itself within a ring of menacing girders.

Turning to the heart of the City, we encounter the low sweep of the iron roof of Fenchurch-street, timidly fearful of its unwarrantable intrusion into the busy world. This structure is a shipping station. Its face speaks of Tilbury Docks and riverside wharves; it appears anxious regarding the times of sailings from the offices of the steamship companies in Leadenhall-street, and then, as if fearful of its own precocity, tries to hide its ugly head amid the surrounding desolation.

The terminus at Liverpool-street is not wholly unattractive despite its Gothic dress, now sadly besmirched with soot. It is customary to take our American friends to this station to point out the vastness of its site and boastfully quote data concerning the thousands of passengers who daily stand beneath the umbrageous roofs. There is something indefinably Victorian about Liverpool-street; it is so easy-going, and we have such pleasant memories of sketching tours to East Anglian villages or quiet river estuaries, as well as an adventurous tour to York by Cambridge, Ely, Peterborough, and Lincoln.

B 2

Yes, Liverpool-street is a decided improvement on the once wooden walls of old Bishopsgate, the terminus of the Eastern Counties Line.

By comparison with its feudal companion Broad-street is a demure Victorian lady. This terminus is not the head of a trunk line, despite the lofty position of the railway tracks and the ostentatious cast-iron crestings on the crude pavilion roofs. But notwithstanding it has the elements of romance, for certain London and North-Western expresses start from here on their popular run to Birmingham.

Three more stations remain to be considered. They are King's Cross, St. Pancras, and Marylebone. The first named was built by Cubitt in the middle 'fifties; it is a well-bred station, with Scottish connections. Its stern aspect stirs our interest for the distant North. Within a stone's-throw of the pavement we can see the escaping steam from the Scotch express. Even the clock turret and its Tam-o'-Shanter cap expresses the wistful look of a newly-arrived Highlander, apparently scanning first the gigantic figure of a Bloomsbury landlady and then glancing towards the heights of Pentonville, as though undecided between comparative luxury or obscure economy.

St. Pancras, across the way, is an opulent structure, recalling the ostentation of the Midlands and Lancashire. It is vast, picturesque, and romantic, for its pinnacled silhouette brings to mind the whole range of cathedrals. The plan of this station is the best in London, for it is based on a Continental model. The concourse is spacious and the approach roads have an air of directness which goes far to atone for the display of hard mediæval features. Sir Gilbert Scott designed the architectural attribute and schooled engineers as to the shape of the steel vault. After 1870 Gothic tradition became an obsession with the Midla Company, for the style was exploited even to Leicest beyond this the line is dedicated to Paganism.

The railhead of the Great Central is practically unkno to Londoners, although more familiar to our cousins fr Sheffield. It is a garish accretion of soulless brick and ca iron, a hopeless example of incompetence in architectu expression. Those who make frequent pilgrimage to Chilterns have the choice of Baker-street or Marylebone, the spectacle of steam-drawn trains forms the greater attracti hence the fame of the newest arrival to the metropolis. is unlikely that the future will witness the intrusion on Londo threshold of further trunk lines, and the reputation Marylebone will rest on the fact that it was the last, as Eus was the first, of eighty years of railway achievement.

There is a human touch in the aspect of the terminals the metropolis, for these ill-designed centres are an index the characteristics of the people whose commercial ne called them into being. It has been declared that the sp of romance, in its wider aspects, was banished with coaching days, but only those without eyes to see can d the interest attaching to modern travel.

During this hasty round of the termini, architecture a to that of railway structures in Paris or New York has b conspicuous by its absence, but we should not forget that energies of the Victorians were directed to strewing the coun with cinders and not to designing architectural monume of civic interest.

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NOTES.

St. Paul's.

CANON ALEXANDER states that £35,000 out of the £70,000 which is required to carry out the necessary structural repairs to St. Paul's has now been collected, and that the "critical" part of the work is almost completed. The foundations have not yet been touched, and it is said that the work to be done will be carried out gradually over a long term of years The Canon added that an efficient system of fire protection for the building had now been inaugurated, so out of the evil and alarm caused by the recent air raids good has come, and they may have made the preservation of St. Paul's to posterity more certain and assured than it was before. We wish its preservation from the mistakes of decorators was equally assured, as it is in that direction that most damage may in the future arise. In the epoch in which it was erected painting and not mosaic was considered as the most suitable means of colour decoration, and we feel the instinct of its builders was the right one.

The Shakespeare Tercentenary Celebration and Shoreditch.

IT is commonly believed that Shakespeare, upon coming to London in 1586, found employment at The Theatre and the Curtain Theatre in Shoreditch. James Burbage, carpenter, and a member of the Earl of Leicester's company, had built, near the Finsbury Fields, The Theatre—the first playhouse erected in London—ten years previously. It stood in Deane's-mews, upon a site that has been identified at the west side of King John's-court, between New Inn-yard and Holywell-lane. Close by, to the south, is the site of the Curtain Theatre, wherein "Romeo and Juliet" was first performed in 1596, "Henry V." three years afterwards, and, in 1598, Ben Jonson's "Every Man in His Humour"—*teste* J. O. Halliwell-Phillipps.* The Curtain, it seems, was situated at the east end of Hewett, formerly Gloucester, street, a cul-de-sac leading eastwards out of Curtain-road, and the "Curtain-court" of Peter Chasseraw's "Survey of St. Leonard, Shoreditch, parish," made in 1745. The two sites, which will be permanently indicated with tablets in the course of the celebration of the current month, lie within the Liberty of Holywell, and in the precincts of the dissolved Priory of Holywell, but are without the verge of the City boundary, and therefore beyond the jurisdiction of the Corporation, who forbade the performance of plays within the City. In April, 1576, James Burbage took from one Giles Allen a twenty-one years' lease of houses and lands for The Theatre, upon which he expended some £650 in all. In the winter of 1598-9 his sons, Cuthbert and Richard Burbage, employed Peter Street, carpenter and builder, to dismantle the structure, and with the materials to erect the Globe, in the Liberty of the Clink, Bankside, Southwark.† We may conclude, then, that The Theatre was, and the Curtain, too, after the "wooden O" kind—that circular in form with an arena for the "shows"—open to the s and having a removable stage for the plays that could be projec into the pit. The apposite style of the Curtain was derived fr the name of the ground which, as we read in the "Outlines," was ca the "Curtene," lying outside the main south gate of the Priory, is cited under that name in a lease of 1538. A "house . . . called the 'Curtayne' [not being the playhouse], and a parcel ground . . . called also the 'Curtayne Close,'" are specifie a deed of 1581 as "sometimes appertaining to the late Priory Halliwell now dissolved."*

The Committee on War Damage.

THE Committee on War Damage, which holds t the Government should assume responsibility damage to private property caused by acts of w has received the support of a large number of municipal authorities of influential cities. T Lord Mayor of York is its President, while the Lord Mayors Cardiff and Belfast and the Lord Provost of Perth are among its V Presidents. We are not sure whether the Committee are justi in their standpoint, though we should be glad to see private individu protected from all disasters which might arise out of the state of w The Government has assumed responsibility for shipping los as it is vital for the country to maintain its imports and expo otherwise such a step in view of its enormous cost would not justified from the point of view of national finance. It is necess that the private shipowner should be encouraged to risk his proper but this cannot be said to be the case with private property a whole, and it is questionable whether the authorities would be w advised in adding to the taxpayers' burdens.

The Associazione Italiano Acquafortisti e Incisori.

AT the Galleries of the Royal Society of Brit Artists in Suffolk-street a most interest exhibition of the work of the Italian Society Engravers and Etchers is being held concurren with that of the Royal Society of British Artis and one-half of the proceeds of sales are devot to the Italian Red Cross Society. No one shou miss the opportunity of seeing work which is characterised a whole by amazing freedom and force, and is devoid of any pronoun tricks of mannerism. A large proportion of the subjects treated architectural in character, and among them are many signs that spirit of Piranesi is yet alive in modern Italy. Among a collect of unusual merit the work of Cesaro Fratino stands out. In No "Iron and Stone," he gives us an impression of St. Peter; in No. 14 vigorous design for a drop scene; and No. 126, "The Angel of Cupola," all characterised by masterly drawing and dramatic for Of quite another quality, but perfect in its way, is No. 63, "Certos by Chiappelli; while the "Apse of the Cathedral at Modena," No. by Ubaldo Magavacca, shows yet another rendering of an architectu subject. The exhibition includes works by Sartorio, Maroni, many who are helping to build up a great artistic era in the coun which saw the birth of modern European art.

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* "Outlines of the Life of Shakespeare." By J. O. Halliwell-Phillipps.

† Street also built for Henslow and Edward Alleyn the Fortune in Cripplegate Without, 1600, and after the fashion of the Globe.

Y VIEWS OF THE "WONDER OF WORK."

By Joseph Pennell.

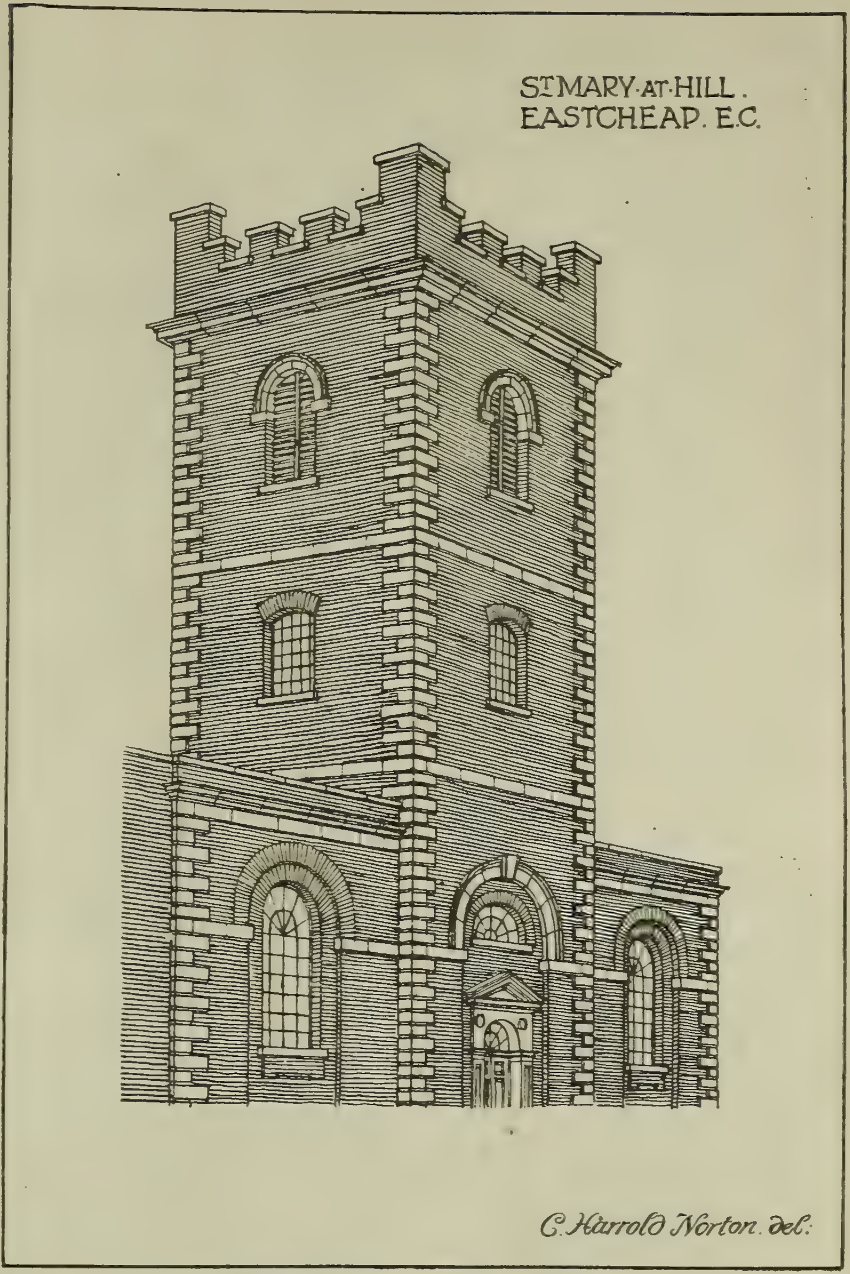
SEND you, in response to your "Note" t you would like to hear more of my iews" about the "Wonder of Work," atement of them—a statement put before editors of *Engineering* and the *Studio* rejected.

[y work, I hope, lacks that "detail which ains in a good photograph, such as those imilar subjects already published in our ur] pages." I hope so! What I have all life been trying to show in my work just this, that there is something in ineering work—the great work of our —greater, finer, more artistic than any r mean machine-made photograph, e or detail drawing, can ever give. I have n, by my drawings and prints of the at works of the day—the great engineering ks—trying to show that they are as fine the temples, the churches, the palaces the past. In fact, that the great engineers of the present are doing just the k in the same way that the great archis of the past did. The architects of the worked for the popes, the princes who d the world. The engineers of the present k for the captains of industry, who own world to-day and run it—or think they Art has always followed commerce, commerce and industry rule the world— the war—to-day. My drawings and ts were not done with any war-like idea my head, but to show how pictorial k is.

have seen most of the great engineering architectural works of the modern ld and most of the great temples and ces of the past, and I know of what I k. I know that great engineering is t art; I know that great engineers are t artists, for the greatest triumphs of neering have been carried out in the t of great art and have produced great not to be rendered by niggling photohs or scale drawings. Let me give you xample. When I was at Panama four s ago I found in the lock at Pedro uel a series of flying buttresses as fine hose of any cathedral, and when I asked engineer—a civil engineer, by the way— Williamson, why he had built them in architectural fashion, especially as they ld be mostly under water, he said use they would best support the lock s, save concrete, and break the force of waves if a storm came on. It was just these reasons save the latter—and the edral builders thought of the wind—that built their buttresses. The trouble you engineers is that you are great ts and don't know it, nor did the cathebuilders; but they knew their work, so do you, only you don't know what have done. But I do!

ake again the drawing of the interior of an Shipbuilding Yard at Hamburg in show of "Germany at Work" at the ester Galleries. The lines are as fine he lines of the interior of the roof of rborough Cathedral, and the same —but the modern architect don't know r most of them don't—and both are the of the roofs of Greek and Egyptian ples which were right from the engineerstandpoint; and a modern fool of an neer destroyed one of the temples of pt—or the Egyptian or British Governt did! The great cranes on the Rhine at Gary and Indiana Harbour are e beautiful than anything in modern itecture.

he steel works at Leeds are superb, and so the Edgar Thompson works at Bessemer. great Lifting Bridge at Sault Ste Marie ner than any gateway of the past, or any gateway a modern architect has built; and the line of the new Connecting Bridge at Hell Gate, New York, when last summer it was being built, was terrifying in its power and might. I could go on for a week and show what wonderful works you engineers have made, and prove to you that you are, or were, till this damnable war broke forth, doing the great work of the world to-day—you, the authors of the "Wonder of Work," are the artists of our time, but you don't know it, can't see it, and prefer photographs and measured drawings, untrue and uninspiring. It was just the same with the cathedral builders; you have to get an artist to show you what you have done, and then you want photographs to prove it—lying photographs.


ST MARY·AT·HILL.
EASTCHEAP. E.C.
C. Harrold Norton. del.

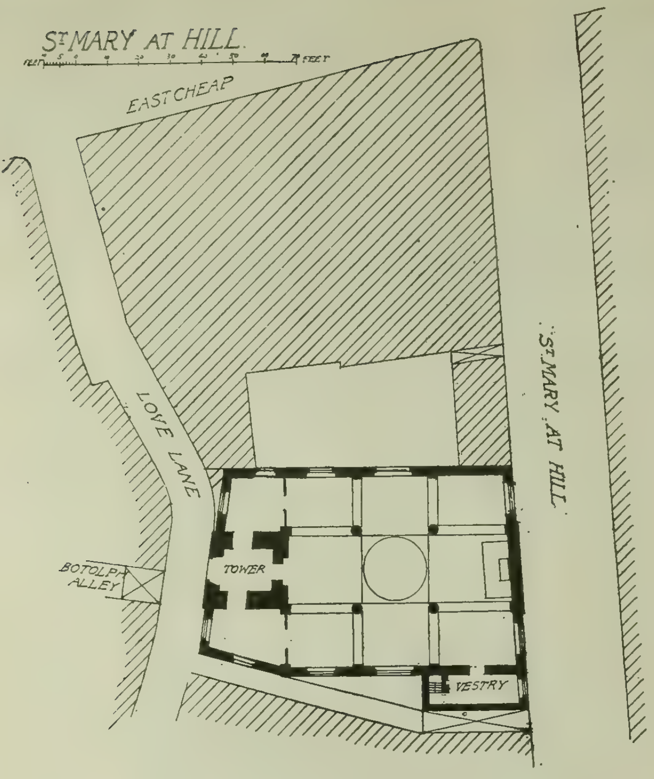
Wren's Churches. (*See page* 294.)

I salute you as great artists, the artists of our age; but in your appreciation of art, in your knowledge of what you have done artistically, you are most of you "fools and blind."

As to the drawings. It was curious and interesting to have the chance of comparing the building of the Woolworth Building with the rebuilding of the Campanile—both of which I was fortunate enough to see and draw, both the result of successful commerce. Nowhere in the world is there such an amazing vista as this down Broadway; and yet scarce anyone pays any attention to it; it has grown up with the generation; but if it was in Europe, on the Continent, the world would rave over it.

And at Genoa, the harbour to-day is only the harbour Claude drew and painted, only it is glorified and magnified; and the interior of the shipbuilding yard is but the carrying on and carrying out the traditions of great art. It is only the methods and the materials that have changed, not the form and the line—they were right from the beginning; and all great artists know they can only carry on tradition, and hope to add a mote of their time—of their own—to it.

The skyscraper is common enough in Italy. At Genoa there are streets of them; New York is but Genoa and Florence brought up to date and made useful and practical, and magnificent as well. We have—or rather American architects have—done this. It is not American art; it is great art. The only American art that I know of is the concrete, steel, and glass factory, and this idea—an American one—has been far better carried out in Germany. We must carry on in all art tradition; the trouble is that most don't



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

carry it on, they fall down before it, or fall down within it, as the various "ists" do. They consciously crib from the primitives, and give themselves away. The primitives unconsciously produced great art; we can only try to bring this great art into our own time, make it fit our needs. If we don't try to do so we are doing nothing for our age and generation, and it is all so difficult; but the artists, and, as I began by saying, engineers and architects are artists. And the great industrial works of our day are as well worth drawing as the great religious monuments of the past. They are the great art of our day, and few artists have drawn and painted them in their might and beauty. No artist that I can find has left any record of the building of the pyramids of Egypt, or the temples of Greece, or the theatres of Rome; we draw their ruins and ignore the finer subjects that are around us—at least most of us do. It is no question of letting the dead bury their dead—art will always live—and we must see the Wonder of Work which is all about us in the living present and carry on the tradition of great art.

JOSEPH PENNELL.

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BURNHAM ABBEY REOPENED.

The ancient abbey at Burnham (Buckinghamshire) is being reopened for use by an Augustinian community. The "Burnham Parish Magazine" for the present month says:—"The Abbey was founded on April 18, 1266, and continued until 1539, the members of the community of Augustinian nuns quietly doing the work they had set themselves to do. On September 19 of that year the abbess and nine nuns took their sorrowful departure, and the buildings which had been given and dedicated to the glory of God "for all time" fell into ruin and became a farm. The original chapel has entirely disappeared (only the abbess's seat remaining), while the chapter house was used as a cowshed. In 1914 Mr. Bissley acquired the property and determined to restore as much of it as possible. Aided by an unusually expert technical knowledge, he has succeeded in restoring parts of the original buildings.

THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. XXVIII.—St. Mary-at-Hill.

THE church of St. Mary-at-Hill abuts the street of that name and Love-lane which connect Eastcheap and Billingsgate. The church, which replaced an earlier one, was built between the years 1672-77, but the tower, which had escaped the destruction caused by the Fire, remained standing till 1780, when it was demolished and the existing one erected. The former tower is shown in an illustration in Maitland's "History of London." The church externally has little merit; the interior is among the most beautiful of any of Wren's work. The plan, like that of St. Anne and St. Agnes, is based on a square of four columns, the entablatures over which support semicircular plaster vaults, the centre being emphasised by a low dome with lantern, and the whole proportion and scale is handsomer and bolder than that of St. Anne and St. Agnes, while the woodwork is especially interesting and well designed; but the church is so dark that it cannot be well seen except by artificial light. Much of the carving was added when the church was repaired in 1848-9, but is well executed and in harmony with the structure. With the parish is united that of St. Andrew Hubbard, which church stood in Love-lane and was not rebuilt after the Fire. The advowson of St. Mary has since the time of Charles I. been in the hands of the parishioners who purchased it.

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FARM LABOURERS' COTTAGES.

Mr. W. H. Gaunt, land agent, Letchworth, believes in regard to rural housing that with a reasonable price of wheat in view some problems of farm labour being unable to pay an economic rent would disappear. The Government, he thinks, should have more courage in taking risks in advancing money to any reputable building organisation for cottage property to lessen the need for tied cottages.

BOOKS.

Butterworth's Workmen's Compensation C
Vol. VIII. (New Series). Edited by His Ho
JUDGE RUEGG, K.C., and DOUGLAS KNOC
barrister-at-law, assisted by EDGAR T. D
barrister-at-law. (London: Butterwort
Co. 1916. 12s. 6d. net.)

IT is almost amusing to remember that whe
first statute relating to Workmen's Con
sation was introduced in 1897 it was inte
to provide a simple code of law which
easily be mastered by the class it was inte
to benefit, and which was to render the i
vention of the lawyer an unnecessary lu
In practice it has proved one of the most dif
pieces of legislation to construe, and it
its successor, the Act of 1906, have been
subject of innumerable decisions by the Hou
Lords and the Court of Appeal. This e
volume of the new series of these re
covers the period from October, 1914
October, 1915, and the cases reported in
House of Lords, the Court of Appeal, the
Court of Appeal, and the Scotch Cou
Session take up 640 pages. These report
now of such established authority and
tation that they need no commendatio
the hands of the reviewer, and therefor
confine our observations to pointing ou
only innovation introduced into this vo
by the editors, which is the printing in l
type in the Outline Digest of those
reported in this volume which they con
of chief importance.

The Housing of the Working Classes
1890–1909, and the Housing Acts, 1914.
CHARLES E. ALLAN, M.A., LL.B., barr
at-law, assisted as to the practic
FRANCIS J. ALLAN, M.D., D.P.H. F
Edition. (London: Butterworth &
Shaw & Sons. 1916. 12s. 6d. net.)

THE third edition of this work was issu
1911 and is now out of print. In this f
edition the authors have excluded the su
of town planning so as to offer a text-bo
housing in a compact form. The work
prises four parts. Part 1 gives a g
summary of the law; Part 2 contain
statutes with notes to each section; P
gives the Acts in a consolidated form;
Part 4 contains the rules, regulations,
instructions. There are besides the tab
statutes, cases, etc., and a good index.
feature in the work is the consolidation
statutes in Part 3. The Housing Acts
flagrant example of legislation by refe
and the authors in presenting the st
in a consolidated form appear to us to
undertaken a most useful task which shou
of the greatest assistance to all who ha
study this subject. May we, however, su
for a future edition that it would even en
the value of this part of the work if in th
of the sections as consolidated some
cation could be given of the exact po
culled from each statute, instead of mer
note at the foot of the sections indicatin
sections incorporated?

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FIFTY YEARS AGO.

Competitions.

Bolton Mechanics' Institution.—The
mittee have awarded the premium o
for the best design for the new Mech
Institution to No. 5, "As you like it
Messrs. Cunliffe & Freeman, architect
Bolton, who were the only local competi
the second, £10, being awarded to No
"Truth prevails," by Mr. W. B. Stewa
Scarborough. Of the remaining
selected designs, "Spes" was by Mr.
Hill, of Leeds; "Education," Mr. J
Young, of Derby; "Non dubitan
Messrs. Jeffery & Skiller, of Hast
and a circular device, Mr. R. W. Hugh
Preston.

[*** From the *Builder* of April
1866.—ED.]

NERAL NEWS.

Professional Announcement.

tenancy of the chambers at No. 14, gham-street, Strand, W.C., having l, it is requested that all letters and for Sir Thomas Graham Jackson, R.A., may be addressed to him till further at Eagle House, Wimbledon.

Professional Conduct.

Council of the R.I.B.A. at their meeting nday, April 3, passed the following on:—“That the payment by any r or Licentiate of the R.I.B.A. of a fee mission to any person in respect of his fices in introducing work is unprofessional all grounds to be avoided.” The Council rdered this resolution to be added to ofessional Conduct Regulations, pub- n the R.I.B.A. *Kalendar*, page 70.

he Morgan Bronzes and Enamels.

ake the following from the *Times* of last y:—“A further serious depletion of rgan loan collections on exhibition in etropolitan Museum, New York, has d through the acquisition from the estate by Messrs. Duveen Brothers, of rk and Paris, of the famous Renaissance , the Limoges enamels, and the majolica The price paid is understood to be neighbourhood of £800,000. The three ns comprise about 500 specimens.”

The Royal Academy.

e House of Commons on Monday, reply- Ir. Fell, the Chancellor of the Exchequer “Exhibitions of pictures, whether by a or a private individual, will be liable amusements tax unless they fall within mption in Clause 1 (5) (*a*) of the Finance Duties) Bill as amended in Committee in the further exemption contemplated amendment as to entertainments pro- for partly educational or scientific s which stands on the paper in my I am advised that the Royal Academy ons and the ordinary form of one- hibitions will be liable to the tax.”

chitectural Association of Ireland.

H. G. Leask (President) presided at a of the Architectural Association of recently, at 15, South Frederick-lane, when Mr. C. J. M‘Dowell delivered a on “Celtic Art.” The lecturer said, ourse of his remarks, that in no country world was the art of building in stone out to greater perfection than in The beauty of design and decoration d in the high crosses, the metal-work, illuminated manuscripts were unexcelled re. Here it was possible to trace the of building in stone from the most and primitive beginnings, in the form ens and sepulchral mounds, to the bee- lls from which the rectangular stone- oratories were evolved. The outgoing were unanimously re-elected for the year.

yal Institute of the Architects of Ireland.

ordinary meeting of the Council of this e, held at No. 31, South Frederick-street, recently, the President, Mr. R. d Orpen, B.A., R.H.A., in the chair, the g resolution was passed:—“The Council Institute desires to place on record its the great loss the profession of archi- has sustained in the death of Robert ne, I.S.O., LL.D., F.S.A. For thirty- ears he loyally supported the Institute, a member and afterwards as a Fellow. s a Fellow of the Royal Institute of Architects. A man of cultivated nd wide sympathies, he filled with ion the position of his Majesty's or of Ancient Monuments in Ireland, on he was specially qualified to occupy o his extensive knowledge as an anti- and his professional training as an t. During the period of his office the f restoration and preservation of the buildings of Ireland was carried out sympathy and skill which his fellow- ts widely appreciated.”

Proposed Purchase of Rossetti Pictures.

The trustees of the late Mr. George Rae, of Liverpool, have offered to the Committee of the National Art Collections Fund his collection of pictures by Dante Gabriel Rossetti. There are ten oil paintings and ten water-colours and drawings, nearly all of the artist's finest period.

Caxton Hall, Westminster.

Councillor Leonard Stokes submitted the proposal at the last meeting of the Westminster City Council that Caxton Hall should be sold and the proceeds invested in War Loan, but his motion was rejected by a large majority. He said that the site alone was worth £50,000, and its only “return” was a loss of £65 a year.

Architects' and Builders' Supplies, Australia.

The managing director of a firm of architects' and builders' specialists who is shortly proceeding to Australia desires to hear from one or two high-class United Kingdom manufacturers desirous of opening up business in the Commonwealth. Communications in this connection should be addressed to the Secretary, Chamber of Commerce, Liverpool.

“Concrete and Constructional Engineering.”

The issue of *Concrete and Constructional Engineering* for April contains several useful articles, including:—“Concrete Work on the Copenhagen Underground Railway,” by Mr. Georg Brockner; “Reinforced Concrete Warehouse, Manchester,” by Mr. E. G. Souster, A.R.I.B.A.; and “Resistance of Concrete Sea Wall to Heavy Storm.” The issue contains many interesting illustrations.

War Housing in the United Kingdom.

In the House of Commons a few days ago Mr. Muldoon asked the Secretary to the Treasury whether he could inform the House of the amount of money advanced by his department to urban councils or otherwise to provide housing accommodation for munition and war workers where a special necessity arose since September 1, 1914; and what amount had been expended in Ireland, England, Wales, and Scotland respectively. Mr. Montagu: “The following issues have been made by the Treasury to Government departments under the Housing (No. 2) Act, 1914—England, £824,000; Wales, *nil*; Scotland, £20,700. No issues have been made under the Housing (No. 2) Amendment Act, 1914, which extends the provisions of the above Act to Ireland. The hon. member will understand that the above figures relate to issues by the Treasury only, and not to grants made by other public departments.”

Compensation for War Damage.

The Committee on War Damage, which represents 370 municipalities in all parts of the United Kingdom, met at Guildhall on Thursday last week to urge the Government in the name of 11,000,000 people to abandon the scheme of war damage insurance, and to provide out of national funds for compensation to those who suffer damage from the attacks of the enemy.

The Lord Mayor of York, who presided, said that the executive wished to avoid anything which could hamper the Government in the prosecution of the war, and would not present their memorial to Mr. Asquith until they could prove that they had public opinion at their back. They would try to convince the Government of the equity of their demands, but if they failed they did not intend to raise any discussion in Parliament till the war was over. The Mayor of Gateshead proposed and it was resolved:—

“That in the opinion of this meeting the Government scheme for insuring against loss or damage by aircraft and bombardment, which had made individual citizens responsible for war damage inflicted on them by the enemy, is manifestly unjust, and it hereby agrees to present a memorial to the Prime Minister urging the abandonment of the scheme; and (1) the adoption of an Act recognising national-responsibility; or (2) reversion to the policy adopted prior to the introduction of the insurance scheme, with compensation for sufferers out of national funds, a condition of the withdrawal to be that the premiums already paid under the scheme should be returned.”

Memorial to W. G. C. Gladstone.

As a memorial to Lieut. W. G. C. Gladstone, M.P., a rood in the village church of Hawarden, given by the Hon. Mrs. W. H. Gladstone and her daughters, was dedicated by the Bishop of St. Asaph on Thursday last week. The rood was designed by Mr. Gilbert Scott, and a suitable inscription is given on an alabaster tablet.

Housing the Liverpool Poor.

In connection with the clearing away of insanitary areas and rehousing the dispossessed tenants, Liverpool has completed twenty-two blocks of dwellings numbering 2,747 tenements, of which 2,193 are reserved exclusively for those people who have been dispossessed. They are, generally speaking, three stories in height, and consist of one, two, three, and four rooms, with rents ranging from 1s. 9d. to 6s. per week. There are also a number of self-contained houses of four rooms, the rents of which are 7s. per week.

Progress of Town Planning.

Since the Town Planning Act came into force and up to March 31, 1915, a period of about five years, advantage was taken, under Part II. of the Act, in England and Wales, to the following extent:—Number of local authorities who had received authority to prepare schemes, seventy-four; number of schemes for which authority to prepare had been given, 105; acreage of areas dealt with, 167,561; number of schemes made, seven; number of schemes approved, four. Subsequent to March, 1915, seventeen local authorities have received authority to prepare eighteen schemes. Besides these, it is understood that application for authority had been made, or preliminary notices served, in respect of upwards of forty other schemes.

Dante and Westminster Abbey.

Miss Troutbeck delivered a lecture on the 13th inst. before the Dante Society in the Jerusalem Chamber on “Memoirs of Dante in Westminster Abbey.” The Abbey and this “Divine Comedy,” she said, were linked as symbols of the national greatness of England and Italy, and it would be strange if the building and its historic significance had escaped the encyclopædic mind of the poet. There was a direct allusion to the Abbey in the “Inferno,” but its special interest for Dante students lay mainly in the many tombs, monuments, and shields, recalling memorable figures appearing in Dante's pages. She called attention to many of these memorials, notably the royal tombs that recalled passages in the beautiful “Valley of the Kings,” and described some of their artistic, architectural, and heraldic features. The Dean of Westminster, who presided, mentioned that in this time of stress some of the most cherished objects that she had described had been removed to places of greater safety, and striking effigies were hidden under a veil of sandbags.

Safety of St. Paul's.

A lecture on “St. Paul's Cathedral: Its History and Preservation,” was delivered by Canon Alexander to members of the London Workers' Educational Association on Saturday at the Chapter House in St. Paul's-churchyard. Canon Alexander, speaking of the danger from fire, said that during the last three or four years inflammable material had been removed and hydrants carried right up to the Dome of the Cathedral. With the help of an electric pump, water could be got up to any part of the building and right over the cross. For the first time in the history of St. Paul's they were now in a position to deal adequately with an outbreak of fire. About half the sum of £70,000 which had been appealed for to make St. Paul's structurally safe was still wanted. The money was not being spent at all on the foundations—a problem which could only be taken in hand after the fabric had been strengthened. If they completed in the next few weeks work now going on at the south-west angle they would have got over one of the most dangerous parts of the building. He was afraid that before the work was finished it would be necessary partly to shore up the south transept to take off the weight from the top of the pier where it was much broken.

Leading Contents.

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ILLUSTRATIONS.

"The Wonder of Work."

OUR illustrations this week are reproductions of some of Mr. Pennell's fine lithographs, and illustrate the points raised in his article on page 293. We hope to give in future issues some of our readers' opinions on the points raised by Mr. Pennell.

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CORRESPONDENCE.

After the War! A British Empire Exhibition.

SIR,—It may be rather early to speak about after the war, but it certainly is not too early to prepare for that time. Much has already been done in the way of further developing our world-wide trade and of introducing new businesses into our midst; but still more will have to be done when peace again crowns our united efforts, if we are to still further increase and retain that trade.

Then the eyes of the whole world will be turned towards England, and then will be the time to show what we can do.

For this purpose a showroom will be needed—a showroom worthy of the country, worthy of the Empire—a showroom where our products of the past and present and our aims and intentions of the future may fittingly be exhibited. In other words, an "Empire Exhibition" will be most desirable to help in this development.

The most suitable site for such an exhibition would certainly be in London, and should be ready as soon as possible after the "Great Peace" has been declared.

The exhibition buildings should be permanent, planned and designed as one whole, in conjunction with the setting-out and arranging of the grounds.

When these buildings have served their first purpose no difficulty should be found in providing other uses for them—*e.g.*, permanent Home and Empire Exhibitions; a real Peace Palace, convalescent and rest homes for our incapacitated heroes, educational and art exhibitions, etc. Never again will such an opportunity occur, and preparations should begin at once. This is a matter of such importance that it ought not to be left entirely to private enterprise, but should be national and subsidised by the Government.

Other opinions would be of interest.

Huddersfield. VOYAGEUR.

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OBITUARY.

Mr. L. Ower.

Mr. Leslie Ower, senior partner of Messrs. Leslie Ower & Allan, of Dundee, architects and civil engineers, whose death we announced in our last issue (page 282 *ante*), was a member and Past-President (1897-8) of the Dundee Institute of Architecture, Science, and Art. He was elected a Fellow of the Royal Institute of British Architects in 1890, and served as member of Council. Mr. Ower practised in Dundee for a while in partnership with Mr. C. Ower; the firm was dissolved by mutual consent in November, 1899. Messrs. C. & L. Ower won the first premium with their designs out of about seventy submitted, for the Inglis Memorial Hall, with library and parish council chamber, offices, etc., Edzell, Forfar, after the Scottish sixteenth-century manner; and they were the architects of the Bannatyne Home of Rest extension, Dundee, and also of—in Dundee—enlargement and new Board-room of the Royal Exchange and Chamber of Commerce, British Linen (branch) Bank, in West Port, premises in Bank-street for the *Dundee Advertiser* and other newspapers under that management, and Pearl Life Assurance Company's offices; alterations with repairs and improvements and vestry and session-house, C.U. Church, Coupar Angus; and they made the designs for the organ, Tayport Parish Church. Mr. Leslie Ower was the architect of Park United Presbyterian Church, Dundee, for 700 sittings in the Early English style (illustrated in the *Builder*, August 13, 1898, No. XVII. of our series, "The Architecture of Our Large Provincial Towns"); Bonnethill U.F. Church, Dundee, extension and improvements; St. Luke's Parish Church, Lockel, with church hall and other additions; and Kinnaird Hall, Y.W.C.A. extension scheme, Tay-street; and the Drill Hall for the local artillery (Territorial) forces, Dundee. Mr. Ower acted as resident architect for carrying out Messrs. Swanston & Symes's designs for the Hippodrome, Dundee.

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BOOKS RECEIVED.

THE CONSTRUCTION OF THE PANAMA CANAL. By William L. Sibert and John F. Stevens. (London: D. Appleton & Co. 7s. 6d. net.)

THE CHANCEL OF ENGLISH CHURCHES. By FRANCIS BOND, M.A. (London: Humphrey Milford, Oxford University Press. 7s. 6d. net.)

FINANCE ACT, 1915, FINANCE (No. 2) ACT, 1915, WITH COMPLETE NOTES. By J. E. PIPER, LL.B. (Lond.). (London: Butterworth & Co. 2s. net.)

TAXATION BY VALUATION AND THE EVILS THEREOF. By FRANK PERKS. (London: Doherty & Co. 2s. net.)

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LAW REPORTS.

KING'S BENCH DIVISION.

DIVISIONAL COURT, APRIL 10.

(Before Justices ATKIN and SANKEY.)

Blunt *v.* Tonkin:

Altering a Picture Palace.

THEIR Lordships heard an appeal by Mr. H. K. Tonkin, proprietor of the Cosy Picture Palace, Somerset-place, Teignmouth, from a judgment of Judge Lush Wilson at Newton Abbot County Court in favour of Messrs. Blunt Brothers, builders and contractors, of Teignmouth, in an action they brought against Mr. Tonkin to recover a balance of account for alterations and additions to a picture palace. There was a counterclaim by Mr. Tonkin for alleged breach of contract to do the work in question in accordance with the specifications.

Mr. R. E. Dummett appeared for the appellant, Mr. F. J. Tucker representing the builders.

Mr. Dummett said the action was brought by Messrs. Blunt Brothers upon a building contract, and there was an absolute conflict of evidence in the County Court as to what were the specifications which were binding on the parties. A question of amended specifications arose, and the grounds of appeal were that his Honour did not decide the issue in this connection, and that his general finding in favour of the builders was not justified by the evidence before him. Shortly, the facts were that in May of last year Mr. Tonkin wanted
some alterations and additions made
picture palace, and asked a Mr. Sew
friend of his at Newton Abbot, to act
architect. Mr. Sewell explained that h
assistant to Mr. Lloyd Downes, archite
Newton Abbot, and Mr. Tonkin arrang
matter with that gentleman, Mr. Sew
fact, doing the work in question.

Mr. Justice Atkin: On what point
are you appealing?

Mr. Dummett: That there was no ev
upon which his Honour could find as h
We also say he did not decide the qu
as to what specifications bound the partie
found that Mr. Sewell was held out b
Tonkin, as his agent, to enter into con
and based his decision on that. My subm
is that there was no evidence upon whi
Judge could find that Mr. Tonkin he
Mr. Sewell as his agent, and no evidenc
he was the agent in the sense that he w
architect.

Without calling upon counsel fo
respondents, their Lordships dismisse
appeal, with costs. Mr. Justice Atkin sa
view of the County Court was quite ju
by the evidence, and Mr. Justice S
concurred.

Important to Painters and Decorato

IN the Shoreditch County Court on Tu
April 11, before his Honour Judge G
K.C., a case of some interest to painte
decorators was heard, in which Jas. Hy.
of 60B, Wilson-street, Finsbury, a p
builder, and decorator, sued Mrs. E. P
of 86, Seymour-road, Harringay, to r
£2 14s. 6d. for decorating and repairing
done. A sum of 25s. had been paid into
as sufficient to pay for all the plainti
alleged to have been asked to do. The
tiff's case was that he was asked to att
the roof of a house belonging to the defe
He took the top off, and then made ever
secure, clean, and tidy. He could hav
tinued right on and finished the job of
ing the roof and doing the necessary p
work to finish off without giving any e
at all, as he was given a free hand.
matter of fact, however, he waited for
instructions from the lady as to wh
wanted done.

The defendant said plaintiff had far ex
his orders, which were to take the roof
prepare it for examination by builders
repair, so that they might give an es
She always had an estimate given for an
that had to be done. He had gone o
the work as if he had been given the
right out.

Judge Cluer said the point in the case s
to be that the plaintiff had done more
builder should have done under the c
stances.

The plaintiff said it was not so, as
taking the roof off he had to make it w
proof, and then tidied things up and
things secure, otherwise it even went so
being a risk to life.

Judge Cluer: You say you do not think
tiff was justified in making things secure
the risk of something falling and killin
one, or in making it clean for the time b

Defendant: I do not think he ought t
done more than he was ordered to do
the roof off—before there had been an es
prepared.

Judge Cluer said he noticed that wa
the lady wrote in June, as the work ha
done in May, which seemed a bit late.

The defendant insisted plaintiff had n
to have done it.

Judge Cluer: But surely a man is e
to make things secure as against a p
accident and death? What would you
said to him had such a thing occurred
had not done it?

Defendant: I wanted to get an estimat
another builder, and he had no right to
before I had got it.

The plaintiff said his verbal order wa
he had been recommended to her, and th
left it in his hands to do the right thin
did not wish to take a liberty in the ma
otherwise he considered he could hav
right on with the job.

Mr Chas. Bates, the tenant of the
said, in view of what had occurred, I
sorry to say he recommended plaintiff.
Phillips distinctly said that, in view
recommendation, he was to do wha
necessary.

Judge Cluer said he considered the p
had acted quite reasonably, as the def
would doubtless have "sung a different
had anything have occurred because he h
done so. There would be judgment f
plaintiff for the full amount claimed and

NATIONAL HOUSING AND TOWN PLANNING CONGRESS.

ATIONAL HOUSING AND WN PLANNING COUNCIL:

Housing Problems After the War.

HE Congress convened by the National Housing and Town Planning Council continued its proceedings at Caxton Hall, minster, on Wednesday, Thursday, and y of last week. On Wednesday further leration was given to the resolution moved r. Shawcross (Chairman) with reference to ning a grant of money from the Govern- for housing purposes. The resolution the meeting was :—" That this Congress the Government to re-enact the Housing Act (1914) to be placed in operation at nd of the war, and to increase the amount ded under the Act to £20,000,000." al amendments were moved to this, and ne result of consultation the following put before the meeting :—

'hat this Congress urgently directs the tion of the Government to the critical need ne provision of additional housing for the ng classes, and that, in respect of the nal interest and responsibility in the er, urges upon the Government to set not less than £20,000,000 to make such nces to local authorities as will enable to provide houses at reasonable rentals, g regard to all necessary and equitable nstances and conditions."

amendment was carried by 117 votes nety-six, and was then further amended ne insertion of the words "and other ies" after the words "advances to local rities."

Congress continued its discussion from revious day on the general question of shortage, and Mr. Councillor Myers sbury) moved :—" That in view of the s produced by the system of providing ng for the working classes hitherto pre- g, this Congress requests the Government ke such steps, either on local or national as will stimulate the activities of local rities and other agencies in the erection of ouses which are necessary."

Cheverton-Brown (Federation of House rty Owners), in seconding the amend- said they recognised there was a shortage 0,000 houses to-day, and there was a ual shortage of 100,000 a year. Although lent of a much-maligned body, he had held with the working classes being led with other than good houses; but they been saddled with the sins of those who houses a hundred years ago, and who, he sed, built them according to the require- then demanded. They could not get ouses required unless they co-operated ner and unless local authorities, utility ies, and private enterprise all sought ovide houses. Speaking with practical edge, he said the first thing to do was to e confidence in the financial market. If could show people that in investing in and mortar they would once again be ing in a sound national security, there once again be no difficulty in getting oney.

S. Smethurst (National Federation of ing Trades Employers), speaking on of the Housing Reform Association, that Association stood for a sufficient roper class of house, and they did not who provided them. If they were going ss resolutions of an extreme nature from f the divergent points of view they would wreck the whole thing. A circular had issued to the builders of the country them to assist in the movement for housing.

resolution was agreed to.

Suggested New Housing Policy.

Chairman initiated a discussion on a new g policy by explaining a Memorandum d prepared. The speaker dealt with the methods adopted in the past for providing working-class houses, and made a number of suggestions for the future. One method was for local authorities to form co-partnership schemes with tenants. He also thought local authorities should have power to lend money to public utility societies for housing, as was now done by the Public Works Loan Commissioners at ¼ per cent. more interest than they had to pay. In such cases the local authority should have power to insist on a certain quality of materials being used, on a good standard of workmanship, and on good design. He further advocated local authorities having power to advance money to builders for the erection of working-class houses on the following conditions :—" (1) The houses shall be built upon land owned by the local authority, and shall be let at a ground rent covering the cost of the land and development charges for a period of eighty years, and including sinking fund charges. The land to be laid out on town-planning lines. If at the end of this period the houses are still in good repair and fit for habitation, the owner shall have the right to lease them for a further period. It is suggested that this should be no more than twenty years at a rent based on the then price of the land. (2) The local authority should be allowed to advance 80 per cent. of the value of the house or houses as certified by their surveyor or a responsible architect, whichever is preferred by the local authority. The rate of interest charged to be ½ per cent. more than the rate the local authority pay to the Treasury or can borrow at themselves. (3) Loans to be repaid in not more than forty years by annual repayments for interest and sinking funds. (4) Houses to be built according to by-laws approved by the Local Government Board. (5) Designs to be approved by the local authority, as also the materials to be used—a good standard of workmanship to be insisted upon. (6) Stipulations to be made as to repairs being properly executed, and in case these are neglected local authorities to have power to do the same and charge to owner. The sanction of the Local Government Board to be obtained before any agreement to lend money is entered into by the local authority, as also their approval of the designs of the houses and the lay-out of the plots."

Mr. R. W. Willan (Manchester), speaking as a builder who had risen from the ranks, as had most builders in Manchester, he said, pointed out that the housing problem was purely an economic one. At the present day builders and local authorities, too, were in the hands of monopolies and trusts, and he instanced cement, which had risen 100 per cent. in price. If only the Labour leaders would meet practical builders and talk over the practical difficulties of the situation he was certain they would be able to come to an understanding.

In subsequent discussion doubt was expressed by several speakers as to whether builders would lease from local authorities and so lose their profit on the land.

No resolution was proposed.

Housing in the Mining Districts.

Dr. T. E. Hill (County Medical Officer for Durham) introduced the subject of the "Future of Housing in Mining Districts." He said the matter was not so much an economic one, because, generally speaking, the miners received a fair wage, and under normal conditions the majority were capable of paying an economic rent, and where there had been housing schemes they had shown their willingness to pay a fair rent. Miners required a large living-room, and many of the plans which had been prepared for housing schemes would not be favoured by them, as the kitchen was too small. He believed the lamentable conditions as to housing now prevailing in the Northern districts was due to the system of "free houses." When, instead of providing the house, the colliery company paid the miner an allowance, he wanted to get a house at a rent which would be covered by the allowance, and with the increased cost of building this was not possible unless he took a house with little or no conveniences. He suggested the provision of working-class houses by the local authorities, any deficiency to be met out of the rates, assisted by Government grants; the adoption of town-planning schemes in mining districts in course of development; power to the local authorities to obtain land at reasonable cost; prohibition of the erection of flats or tenement dwellings, and no dwelling to contain less than three rooms; a minimum floor space in every room; the provision of a bathroom and water-closet; the erection of lodging-houses for single men to prevent the overcrowding of dwellings.

Mr. T. H. Cann (Secretary, Durham Miners' Association) expressed the opinion that the statement on the conditions by Dr. Hill would have a great effect in the Durham mining district.

The discussion generally turned on the system of free houses, which Mr. Hogg (Northumberland Miners' Association) thought the miners would be very loath to give up, as it was an ancient privilege they clung to.

Mr. Myers (Dewsbury) hoped the experiments in the building of colliery villages in Yorkshire would not be followed, and said he noticed at the model village of Maltby one of the houses erected six years ago had fallen in, whilst the village was as congested as many an industrial area.

No resolution was moved on the subject.

Housing of the Poorest.

Mr. H. R. Aldridge (Secretary, National Housing and Town Planning Council) submitted a Memorandum on "New Developments in a National Policy in Regard to Slum Destruction, the Suppression of Overcrowding, and the Housing of the Poorest." He said the suggestions he made were admittedly drastic, but after witnessing year after year the condemnation of the slum property, which still survived, he had come to the conclusion that they needed to be scientific and to cut away remorselessly. He suggested that all those who let houses for habitation by the working classes should be required to apply to the local authority for a certificate, renewable every three years, certifying that the house was in all respects reasonably fit for habitation. At the end of five years no house in regard to which such a certificate was not possessed by the owner should be inhabited. Also a local authority should be forbidden by Act of Parliament to permit the occupation of a dwelling with an average of more than two persons to one room, or, alternatively, the occupation of any room as a sleeping-room with a less provision than 400 cubic ft. of air space per adult. He proposed the following resolution :—

"This Congress urges all parties in the State to take combined action to secure that every family shall be housed under proper conditions, and that in order to secure this end, which is of vital and national importance, legislation should be introduced—(*a*) To set up machinery in all industries to require employers to pay wages sufficient to ensure decent housing accommodation for the workers in these industries; and (*b*) to secure that where such raising of wages can only be achieved by stages the local authority shall recognise and fulfil the duty of providing decent housing accommodation for the poorest, and that the whole country shall bear the difference in the cost between the rent of the decent dwelling and the rent which the tenants can afford to pay."

Mr. B. S. Rowntree seconded the resolution, and said in connection with such a matter it was impossible to ignore the problem of the low wage. He advocated the setting up of Trades Boards to fix minimum wages in all trades.

Mr. Pearse (Nottingham) moved as a rider :—" That, in the opinion of this Congress, housing schemes promoted by public authorities, save in the case of schemes intended for housing the poorest, should be economically self-supporting."

Mr. McKellan (House Builders' Association, Manchester) seconded the rider, and described the manner in which the builder was taxed, and, he added, " then you call a conference in London and call him nasty names."

Several amendments were handed in, and eventually both the resolution and the rider were carried with the substitution in each case of the words " those unable meanwhile to pay an economic rent " for the words " the poorest."

Insanitary Rural Property.

Dr. W. G. Savage (County Medical Officer of Health, Somerset), in discussing the question of insanitary houses in rural areas, said the co-operative societies looked at the problem of rural housing and passed it by, and private enterprise did the same. He did not care whether it was the State, the municipality, or private enterprise which provided the dwellings so long as they were provided. If financial aid from the State was forthcoming to an extent which would transform the scarcely-veiled antagonism of the Rural District Councils in regard to building schemes into active and willing co-operation it should go far not only to solve the housing shortage, but the existing difficulties in the way of dealing with insanitary property.

Sir R. Winfrey, M.P., considered the Rural District Councils might be subsidised with regard to housing for a period of ten years, after which the position might be again reviewed. If the local authorities would only build ten or twenty small cottages to be inhabited by the aged inhabitants of villages, who now often occupied larger dwellings, it would go far to solve the difficulty. The experience of some half-a-dozen Rural Councils in Norfolk who had carried out housing schemes showed that it was possible to do so and let them at an economic rent.

Miss Cochrane suggested that the State should provide houses for the Old Age Pensioners, and also that Rural Councils might have the opportunity of buying the timber now being used for huts by the military at a cheap rate, to be employed in the erection of cottages.

Work of Public Utility Societies.

Mr. E. G. Culpin described the work of public utility societies, and contended that it was by means of such societies that the housing problem could best be solved. There were some sixty societies actually at work building houses, whilst sixty or seventy others had been formed with the view of getting to work at the close of the war. The great landowners of the country were showing their interest in the matter, and Lord Crewe, Lord Salisbury, and others were developing their land on these lines. The total area being developed by the societies was 1,600 acres, and about £5,000,000 was engaged to be spent on the development of land in this way. He believed this would become the most important agency for housing that they had.

Preparation of Schemes.

Arising out of a motion that the resolutions passed by the Congress should be submitted by a deputation, Mr. H. Gilbert Whyatt (Borough Engineer, Grimsby) pointed out that the deputation should make it known that the Local Government Board discouraged the preparation of schemes. If a local authority sent up a scheme it was told it had better stand over until after the war.

Mr. Aldridge said it was true that the Local Government Board would grant no loans, but he had it from the Chief of the Town-Planning Department that they were eager that local authorities should prepare schemes so that they might be proceeded with at as early a date as possible.

The Future Village.

Professor S. D. Adshead, F.R.I.B.A., taking part in a discussion on the needs of the agriculturists, said that until they got a national Road Act they would never get their communities properly connected together. They wanted a Road Board with power to plan future roads, and once having got that they could proceed to deal with the villages and open up agricultural areas which at present had no connection with suitable markets. With regard to the kind of village they would like in the future he depended very much upon public utility societies. A five-roomed cottage would necessarily have to be the standard in the future for the family, but there was still room for smaller cottages for the aged and for young married couples. Little had been said at the Congress as to the cost of building, but so far he considered they had been building with too much material and too little brains. He felt there were yet many ways in which such cottages could be produced more economically than they were producing them now, and a great deal could be done by a modification of some of the present unreasonable by-laws in rural areas. Dealing with the building up of village life in the future, the speaker described such a new community to be erected after the experimental stage was passed. He said they might suppose the site to be five miles from a railway-station and two miles from the main road, to which it was connected by a 16-ft. newly-constructed asphalt path. The land acquired might be 4,000 acres suitable for mixed farming. The 4,000 acres would be mapped out roughly into fifty or 100 farm lots, and a certain number would be again divided into 5-acre plots for intensive culture. Farm buildings and a cottage would stand on each farm, grouped around a farmyard, and the village would in its principal features be very much like what was seen to-day. There would be a church and a chapel, a public-house, a general store, a butcher's shop, a smithy, and a post-office. The difference would be seen in the result of a co-operative system that, interwoven in the social fabric of the community, had created an independence of spirit, creative ability, an interest in life, and a capacity for overcoming difficulties of organisation previously unknown. All the farm buildings and the cottages would be designed so as to incorporate in their construction standard details—doors, windows, staircases, gates, railings, etc.—which, after the most careful consideration, would be manufactured in thousands in accordance with approved designs. The materials of which the solid walls were constructed would depend upon the possibilities of the district. Where there was plenty of gravel the construction would be of concrete. In a brick district it might be cheapest to build in brick, or with a combination of brick and concrete reinforced, and in many cases buildings might be framed in steel and roofed with asbestone, permanite roofing, or wood. Small buildings constructed of almost any material would prove satisfactory, provided they stood on a concrete slab. The great feature of the cottage would be the kitchen, which would measure at least 22 ft. by 15 ft. A bath would have to be provided, perhaps of the tip-up pattern, and it could be placed in a recess or under the stairs. On clay soils the floors would be of concrete covered with linoleum, and on sandy or gravel soils the concrete would be omitted and the floors would perhaps be of wood. If the bricks were good, a 4½-in. brick or a 3-in. concrete outside wall would be perfectly satisfactory, always providing there was an inner lining to prevent damp. The inner lining could consist of coke breeze concrete slabs about an inch in thickness, leaving an air space of ½ in., and stuck to the outside wall with bits of slate and cement. Such slabs, manufactured in immense quantities and used in such a way, would make cottage building 25 per cent. cheaper. The three upper rooms would be partly in the roof and flat dormers would be bought ready-made from stock.

Homes of Married Men.

A great deal of discussion took place on the questions of the preservation of the homes of married men called to the colours and also as to finding employment for wounded men returning to civil life.

Mr. Pearse (Nottingham) protested against the attitude adopted by officials in Labour Exchanges in dealing with the applications of such men. He also considered that the making of provision for men returning from the Army and also the growing difficulty of getting domestic servants would lead to a remode of garden-city schemes. They would rec to erect buildings more in the nature of ho with one common room for meals.

Mr. Smith (Hull Master Builders' Associa said the rent of the houses occupied by called to the colours must be paid by someb and they wanted the Government to definitely that they would pay it. property-owners were men of small ca and already they were refusing to let h to men of military age.

The following resolution was passed on motion of Mr. D. Rider (War Rents Lea seconded by Mr. Whybrew (Workn National Housing Council) :—" That Congress is of opinion that the only equi way of preserving the homes of men calle the Navy and Army is by the Governm making the necessary provision out of nat revenue."

In respect to the further discussion on employment of disabled men, the follo resolution, proposed by Alderman Trou (Southport) and seconded by Mr. P (Nottingham), was carried :—" That Congress is of opinion that a national orga tion, working through committees, appoi by the local authorities, should be for to find suitable employment for dis soldiers and sailors who, when trained employment and efficient, should receive full current rate of wages paid in occupation, independent of any pension may have."

Land Settlements for Soldiers.

Mr. E. G. Culpin brought up the subje the scheme prepared by the comm appointed by the Government with regar settling disabled sailors and soldiers on land, and said that in it they had the nu of the most complete revolution the cou had ever witnessed. It contained the gern what might lead to the entire reconstructio rural life in the country. What they must at in the establishment of the proposed col was the revival of peasant art. He ho however, that the plan attached to the mittee's report showing the arrangement grouping of the new villages would no approved, because to take two miles of and dot cottages along it was not the wa make a community. Whilst he had al been opposed to some of the by-laws of districts, he thought there was danger in proposal to exempt buildings erected unde Small Holdings Act from the by-laws, becau they did that the farmer who wanted to a cottage would also want to be exempt was also proposed that the War Office sh hand over to the Board of Agriculture disused hutments for conversion into buil for small holdings. That would not be attractive picture for returning soldiers. had no objection to wooden houses, but did not want disease-carrying timber ut for providing homes for soldiers.

No resolution was moved on the matter.

Town-Planning Schemes.

Mr. George Cadbury (Birmingham) desc the town-planning schemes of his Council, particularly the South Birmingham sch which is now in course of development. paid particular attention to the questio roads, and said that in the case of the six radial roads along which trams ran or projected, and a section of the wing it was hoped the width would be 120 ft was proposed to put the service pipes u the footway, and this they considered a important development, because as roads now constructed it did not pay to break up. As regarded town planning generally hoped that a maximum of twelve hous the acre would be the standard for the futu

The Bishop of Wakefield made a spi appeal to all present to forward town plan in every way possible. He referred to apparent failure of the efforts made enlightened residents to plan the Doncaster coalfield on town-planning That district might have been made a veri Garden of Eden, but whether it was pos to save anything from the wreck now he not know. Another Yorkshire problem arising at Huddersfield. The Corporation

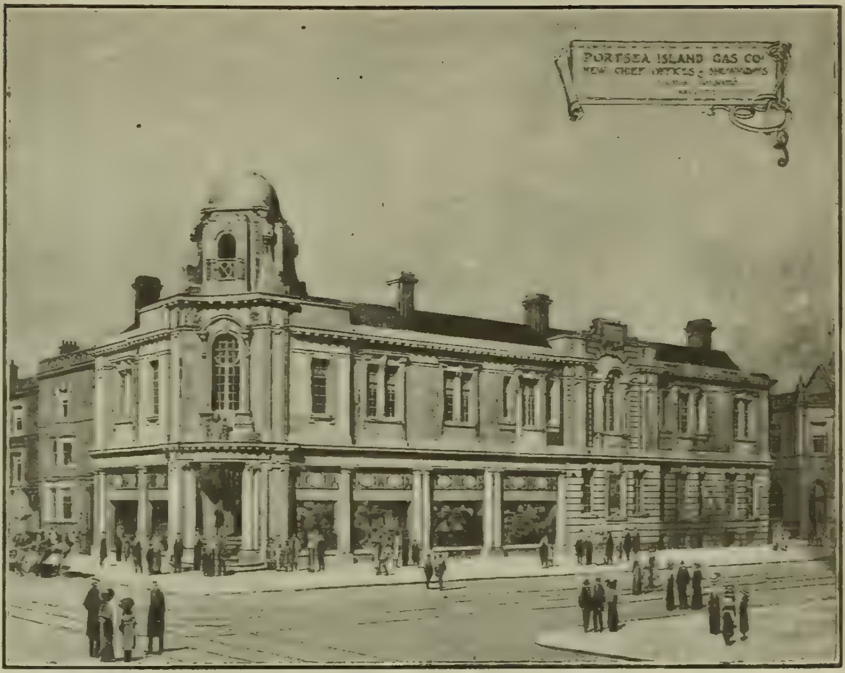
l scheme in preparation before the war
ced, but now they were faced with a
ndition of affairs. The Dye Company,
to make the dyes formerly supplied by
y, was erecting works which, when
ed in the near future, would employ
ds of men. These men would have
oused, and, being skilled workers, he
they would be well paid, so that here
hance of erecting houses of a good type.
however, some good town-planning
was thought out at once and agreed
e sudden emergency might find them
red.

F. M. Elgood (Ruislip-Northwood)
hat the staff at present engaged in
rvey might have their attention called
of the pressing and practical features
d with certain town-planning schemes
were temporarily suspended merely
of means and men to carry them a stage
There was not the slightest obstruction
art of the Local Government Board to
aration of schemes. Without attempt-
gislate generally upon details of develop-
hich created differences and might
quire considerable time for adjustment,
thorities at the present time might
the propriety of confining their
to the following points:—1. Laying
e lines of main routes of communication.
sion of open spaces and reservation
s of interest and view-points. 3. The
tion of the banks of watercourses and
4. The limitation of the number of
o be built in particular areas. 5. The
provision of building lines on existing
roads. 6. The restriction of factories
ain other buildings to particular areas.
oss Young (Town-Planning Engineer,
hire) expressed the view that it was
y to get legislation which would permit
carry out main roads, although the
their scheme had not been considered.
illor Pemberton (Warrington) said
h the present shortage of houses the
would be faced with a grave problem
ose of the war. Owing to the stagna-
he building trade many skilled workers
d before the war, and many had since
the front. They were 2,000 houses
n Warrington. He thought town
should be made compulsory.
lwyn Lloyd (Welsh Town Planning
using Trust) urged the necessity of
planning.
further discussion, the following
proposed by Mr. Harrison Barrow
gham), was carried:—
: this Congress, recognising the need
ng ready building and other schemes
l employment at the end of the war,
the great need for the further provision
s for the working classes, which can
met by municipal enterprise, where
encies fail, and recognising further the
ges in building such houses in connection
wn-planning schemes, urges upon all
thorities throughout the country the
importance of preparing housing
at once where there is a lack of suitable
odation and of taking the necessary
o promote and press forward town-
; schemes in their area."

Cheap Building Materials.

morandum by Mr. H. L. Patterson,
A. (Sheffield), was submitted on
ossibility of Adopting New and Cheap
; Materials and Securing Economy
Design of Cottages, provided that the
l Standards of good Building Construc-
. of Wholesome Environment of Dwell-
e not Impaired." The author dealt
e type of cottages generally designed
past, and in regard to the cottage of
re said they must try to get away from
rst features with as little extra cost
ble. This was by no means easy, and
ller the type of cottage the greater was
iculty. He advocated the provision
bedrooms even in the smallest cottage,
e abolition, where possible, of back
s. As far as possible there should
ssential difference in the treatment of
k and front. For nine-tenths of the
in towns brick was and must remain
the usual building material. An economy would be a modification of some of the rural by-laws as to the height of rooms. A 9-in. by 9-in. flue was ample except for the kitchen range. In walls of the dimensions of 9 in. of a height of 16 ft. or 18 ft. it might be permitted that they should go down to a concrete bed without off-sets at all. Pure bitumen sheeting was the best and cheapest material to use for damp-courses. In many by-laws the sizes of timber stipulated were needlessly large. If cheapness was desired there was no need to plaster scullery and pantry walls, but they could be pointed and whitewashed. The author discussed some of the newer methods of construction, and said it was quite possible that, used on a large scale, some of them might be more economical than the old; but a comparison of tenders actually received tended to show that for a small number of houses at least the ordinary methods to which workmen were accustomed were still the cheapest.

Time did not allow of the discussion of the subject.



Offices, Portsea Island Gas Company.

Mr. V. Wilkins, Architect.

NEW CHIEF OFFICES AND SHOWROOMS, PORTSEA ISLAND GAS COMPANY.

This building is situated in a prominent corner position on the site of the former offices of the company in the Town Hall Square at Portsmouth. The elevation is in Portland stone, and Welsh green slates are used for the roof. The basement is devoted to showrooms for gas cooking stoves, general stores, and strong-rooms. There are also rooms for the ventilating, heating, and the high-pressure gas plant. Further, there is a large cycle store, approached from the outside by a slope adjoining the staff entrance, where accommodation is provided for the bicycles belonging to the outdoor staff. The ground floor is divided into showrooms and general offices. The main entrance is approached through a circular porch on the corner.

Model rooms have been designed to exhibit the various gas appliances. All the screens, enclosures, fittings, and desks are carried out in mahogany, and the artificial lighting of the general offices is on the semi-indirect system. Situated at the rear of the general office is the staff entrance and cycle slope to basement.

The main staircase out of the showroom leads to a large square hall on the first floor. On this floor is a demonstration hall for lectures, Board-room, directors' rooms, and rooms for the general manager, secretary, and their staff. The Board-room is panelled throughout in mahogany.

The back part of the first floor, which is served by a separate staircase from the staff entrance, is planned to accommodate the automatic collectors' staff and additional offices and main staff lavatories. The caretaker's quarters are situated on the second floor.

Messrs. Sabey & Son were the general contractors. Mr. Victor Wilkins, of York-buildings, Adelphi, is the architect.

DANGEROUS STRUCTURES.

At a meeting of the Concrete Institute on March 15 Mr. W. G. Perkins, District Surveyor for Holborn, read an interesting and useful paper entitled "Some Examples of Dangerous Structures," in the course of which he said:—

"Amongst the causes of a dangerous structure are the following:—

(*a*) Faulty construction.
(*b*) Faulty materials.
(*c*) Faulty design.
(*d*) Decay and fatigue.
(*e*) Overloading.
(*f*) Removal of extraneous support.
(*g*) Wind pressure, shock, etc.
(*h*) Fire and explosion, bombs.

I propose to enumerate a number of cases where failures have resulted from one or more of these causes; generally speaking, several occur at the same time, particularly (*a*), (*b*), and (*c*).

Perhaps few of us have had any experience with failures arising from faulty design and materials in modern structures, as a sufficient period has not elapsed for time to have done its work, but there are numerous instances in buildings erected by former generations.

We moderns are often called to account for the supposed inferior manner in which we build, being told that our buildings are not solid like those erected in "the good old times," that we have lost the art of making good mortar, etc. People who make such remarks have, I fear, only an acquaintance with the jerry-builder of the very bad type. The majority of buildings erected in London 100 to 200 years ago were constructed in a most inferior manner. The mortar appears to have been compounded with a fat lime, dry slaked, and, judging from the nodules of loam it contains, mixed with a good deal of the "top spit" of the field. Naturally such stuff has, and had, no binding qualities, and to this day is only so much dusty rubbish.

The bricks were badly shaped and easily broken, so much so that in taking down old walls one finds course after course of what appeared to be headers to be only "bats." This resulted in the walls being built in a series of "half-brick" or 4½-in. skins, which sooner or later separated and bulged. If carefully examined it will be seen that many of the bricks which at first sight appear to be "headers" are too wide and really consist of portions of stretchers—*i.e.*, "bats."

Generally speaking, this bulging occurs in the basement story immediately below the level where the thickness of the wall diminishes by means of a "set-off" from one thickness to another, say 1 ft. 10½ in. to 18 in.

Sometimes large portions of brickwork roughly triangular in elevation and wedge-shaped in section burst from the walls, and when this is the case no time should be lost in needling the walls well above the point where the failure shows itself.

In many old buildings the main beams of the floors are placed diagonally, and the loads from the roof and four stories are imposed upon a pier of brickwork about 14 in. square.

Several cases I have dealt with have been party walls built with the bricks and mortar before described, about 50 ft. in height from the basement floor line to halfway up the gable. They have failed by crushing in the basement, although the load consisted of only their own weight and that of the dwelling-room floors and furniture on them. The floors have been divided into bays by beams spaced 10 ft. or 11 ft. apart. With 40 ft. in height of 14-in. work and 10 ft. of 18-in. work the weight per square foot at basement floor level from the wall itself would be per foot-run :—

40 ft. × 1 ft. 2 in. = $46\frac{2}{3}$ cubic ft.
10 ft. × 1 ft. 6 in. = 15 „

$61\frac{2}{3}$ cubic ft.

which at 112 lb. per cubic ft. = 6,867 lb. The weight of the joist and boarded floors would be 12 lb. to 15 lb. per square foot, so that we should have per foot-run of wall 4 ft. × 10 ft. × 1 ft. × 15 lb. = 600 lb.

The superimposed load on the floors cannot be stated with anything like accuracy, as it varies with the affluence of the tenant (I am speaking of dwelling-houses), but let us suppose it is as much as 56 lb. per square foot. As the roofs were very steep and covered with thick tiles which absorbed a large amount of water, and which were pointed and bedded in mortar in many cases, let us assume they also weighed 56 lb. per square foot of covered area.

This will give us per foot-run of wall four floors and one roof = 5 ft. × 10 ft. × 1 ft. × 56 lb. = 2,800 lb. Total load per foot-run, 6,867 + 600 + 2,800 = 10,267 lb.

The lower part of the wall being 18 in. thick, this gives us a pressure of $\frac{10267}{1 \cdot 5}$ = say, 6,845 lb., or a trifle over 3 tons per square foot as the ultimate load.

If 56 lb. per square foot superload on the floors is too high, then the walls have failed under a pressure of less than 3 tons per square foot. It must be remembered, however, that these walls have been standing some 200 years, and therefore the failure may be due partly to fatigue. Strangely enough, this kind of brickwork is always stronger in damp positions, the moisture having enabled the lime to a certain extent to set. Workmen refer to this state as being "waterbound."

Again, I have found a wall of this period built with two skins of brickwork, 4½ in. thick, "tied" together with wooden laths at intervals of about 18 in. in height, the space between being filled with small pieces of brick and stone.

A form of construction frequently found is a shell of 4½-in. brickwork around a stout timber post. You see the brickwork bulging and wonder why a stout-looking pier, perhaps 2½ bricks square and 8 ft. in height, should be failing under a comparatively light load. The explanation is that the timber post has decayed at its lower end and the thin shell of brickwork is unable to carry the superstructure.

A very interesting case of this kind was a building near Queen-square, Holborn. Having occasion to inspect the premises, I found the walls generally were of the kind already described and that the piers of the front external wall were yielding. The piers were cut into and, as I suspected, timber posts, rotten at the ends, were disclosed. These posts extended up to the second floor, and were quite sound in the upper parts.

Sir Francis Fox was consulted by the owners, and it was decided to grout the whole of the walls with Portland cement. Numerous small holes were cut in the interior faces just large enough to insert the nozzle of the grouting-machine. After well soaking and washing the interior of the wall with clean water under pressure from the machine, Portland cement grout was pumped in, and as it appeared at the joints and cracks it was dammed with clay stuck upon the faces of the walls by workmen watching for its appearance.

The whole of the walls were treated in this way with success. Prior to the grouting they sounded hollow, but they now sound and have every appearance of being solid. After the grouting the wooden posts were cut out of the piers and substituted by brickwork in cement.

Modern brickwork is not without its faults, due principally to the lax manner in which it is supervised and an imperfect knowledge on the part of the specification writer. He will, for instance, require that four courses shall not exceed 12 in. in height, and then select bricks that are very little less than 3 in. in thickness. The consequence is that the bricklayer, to keep to the specification, will put an insufficient bed of mortar in laying the bricks. I have had as much as 3 ft. of glazed brickwork at a time taken down because there was absolutely no mortar in any of the beds. And this was on a first-class job, under architects and a clerk of works. Again, when the bricks have a frog, that frog should be upwards when the brick is laid, otherwise the brick beds only on the rim and its bearing area is reduced by one-third. When the bricks have two frogs one should be "buttered" or filled in before laying.

Unless strictly supervised the vertical joints are never filled solid. Some mortar is rubbed over the top of the course with the flat of the trowel, which may enter the joints some ¾ in. Particularly is this the case with Staffordshire blue bricks, which are certainly difficult to make solid work with, as, using the workman's expression, they "swim all over the place."

To ensure solid work the beds should be thickly spread and the bricks pressed down into it, frogs up, and the whole course grouted up by heaping mortar on the wall and softening it with water from a "gauge-pot" so that it becomes soft enough to flow into the vertical joints until they are full.

Unless the beds and joints are full you cannot expect to get the full value out of your walls and piers, which, by the way, are always eccentrically loaded. The evil is aggravated when the wall is faced with stone, for the mason generally spreads a bed of putty, 3 in. or 4 in. wide, along the outer edges of the stone he is laying (which may be 14 in. or 18 in. on bed, such as I have lately seen), points up the back edge, and, after having poured some grout down the vertical joints, considers he has made a solid job. Have the stone taken up again and note the result. Workmanship of this sort leads to "flushing" and the fall of pieces of stone. The bed of every course of masonry should be screeded.

Many people object to slate damp-proof courses, as they become inefficient owing to the slates cracking. They only crack or crush when they have been imperfectly bedded. The usual way is to lay them on a bed of cement (perhaps containing a number of small stones) and tap them down with the trowel. This always results in the centre of the slate being unbedded. Walk along such a damp-course on your heels, and you will demonstrate to the builder in a striking manner the hollowness of his work.

Use cement made with a sand that contains no small stones, rub each slate well into its bed, and you will get a damp-proof—not a damp—course.

I am not partial to asphalt damp-proof courses unless they are of genuine asphalt.
Artificial asphalts are brittle when c
become soft in the heat of summer or
heating chamber, and squeeze out. Th
settlement, and, in the case of a reta
other wall with a lateral thrust to
may allow sliding on the bed, a resul
happened not very long ago "somev
the Midlands." Failures have occu
using unsuitable materials in the com
of concrete.

Many overhanging cornices of s
brickwork and cement have become da
through being insufficiently weighted
down.

The weight of the overhanging por
its overturning moment must be
estimated, and a sufficiently heavy
course added so as to obtain a mo
stability of at least two.

The top of the wall upon which the
rests should at the same time be well
for the cornice, though stable in itself
reason of the eccentric load it impo
the wall tend to draw it outwards.

From cement cornices the modilli
sheets of cement will fall, and I have
this to occur generally after a period of p
wet weather.

In my district there are many para
balustrades of Roman cement contai
cores which have rusted, bursting th
trades so that pieces fall on to the foot

The type of cornice and parapet mo
to fall is that occurring in a terrace c
having V-shaped roofs. There is a con
area of thin wall exposed to the weather
sides ; wet and frost soon destroy the c
properties of fat lime mortar, and
overhanging weight of the cornice, plus
a little wind pressure or vibration, b
whole lot down.

A case that frequently occurs is th
wall supported upon a beam of timbe
in turn is often carried by timber sto
In course of time these timbers bec
cayed, nearly always at the ends, and
through water gaining access.

In some premises in Holborn wher
shop front was to be inserted I found t
ends of the wooden bressummer were a
rotten for a length of 2 ft. to 3 ft.

The rainwater pipes which came d
face of the buildings had a "swa
just above the level of the shop front,
from thence downwards being reces
the face of the piers separating the
The pipes had become partially c
the swan necks and had leaked at th
this having gone on for years. Th
in consequence became rotten, and
wall had settled considerably.

It would have collapsed had it not b
small 3-in. cast-iron column in the cent
shop front, and the friction against
of adjoining premises. The only su
this column was the 4 × 3 in. rol
joist.

The condition of the front bre
caused me to inspect that which ca
main back wall. This I found to be
worse state, as the wet had been gettin
the flashings of the flat roof over
portion of the ground story. A c
defective gutter over the cornice of
front is another cause of rotten bres

To deal with these cases the wall
needled and shored, "punching up"
part of the beam before cutting any
needles, and then a new bressummer i

◆

THE CHURCH OF OUR LADY OF S
CIRENCESTER-STREET, HARROW-ROA

The new schools and church addi
the Church of Our Lady of Sorrows, Ci
street, Harrow-road, W., were opene
Eminence Cardinal Bourne, Archbi
Westminster, on April 14. The
church has been extended and new c
and concert hall, with roof and pl
over, have been added. The work was
to Messrs. E. A. Roome & Co., buil
tractors, of Urswick-road, Hackn
carried out under the supervision o
Tasker, Williams, & Major, archi
2, John-street, Bedford-row, W.C.

THE BUILDING TRADE.

CREASE OF RENT ACT.

Increase of Rent and Mortgage rest (War Restrictions) Act, which e into force on December 23, 1915, has duced some unlooked-for results, as the two actions brought by arrange- ascertain its effect, Rees *v.* The f Bute and Davies *v.* The Same.

te had put up for sale by auction cottages on leases for ninety-nine small ground rent, the tenants to es, taxes, and outgoings, to do the d keep the cottages insured. The of sale were prepared before the Act force, but the sale took place on , 1916, and at the time of the sale d Bute nor his advisers were aware would affect it. After the sale they re of the provisions of the Act, and leclined to complete until the opinion t had been taken. The action was performance. Rees, who bought cottages, was not a former tenant; was tenant of the cottage he bought. hase price of the cottages was £55 0s. respectively, and £2 10s. for and auctioneers' charges. It was at the properties were of a character e Act would apply.

stions raised were:—1. In both the purchase-money be "a fine, r other like sum in addition to the e grant of a tenancy within sect. 1 Act? 2. In the case of the pur- ant, would the transfer to him of to pay rates, taxes, repairs, and ome within sect. 1 (1) (III.) of the

ce Younger, in delivering judgment, e sales were beneficial to the tenants, on of Lord Bute in enabling persons was much appreciated in South e purchase-money and the other ould represent a less sum than the rent," but he could find nothing exclude leases for ninety-nine years tenancies within the Act, and, that e payment of the purchase-money "fine, premium, or other like sum to the rent," recoverable by the er sect. 1 (2). In these circum- refused to grant the plaintiffs formance of the contracts, and on aking of the defendant to repay e had received the actions would d.

ns being of a friendly nature the een arranged. This finding on the made it unnecessary for a decision n on the second point as to the ho was a tenant.

sue for January 21, in an article on e pointed out that in the passage hrough Parliament the Act had lost character as an emergency measure gned to prevent tenants from being areas where population was con- war purposes, and in its present Act of universal application we took o it.

udgment of the learned Judge he reat regret that he was compelled e contracts aside, but he said the led him to do so, as, although the emergency measure obviously, as dicated, passed to meet a crisis, n munition areas, the courts were o construe it as framed.

always wondered how the original f this Act came to be so entirely in the passage of the Bill through but now it is proved that in conse- ts provisions even a long lease of rties highly beneficial to the tenants ersons cannot be granted we trust nay at once be taken to amend the t it may carry out the original d nothing more.

NEW GOVERNMENT CONTRACTS.

War Office.

Stoves, etc.—Albion Iron Company (London), Ltd., Belper, Derbyshire; Callendar Iron Company, Ltd., Falkirk; Carron Company, Carron, Stirlingshire; Dobbie, Forbes, & Co., Larbert, Stirlingshire; Falkirk Iron Company, Ltd., Falkirk; S. J. & E. Fellows, Ltd., Wolverhampton; Forth and Clyde and Sunnyside Iron Companies, Ltd., Sunnyside Iron Works, Falkirk; W. N. Froy & Sons, Ltd., Brunswick Works, Hammersmith, W.; Griffiths & Browett, Ltd., Birmingham; Jones & Campbell, Ltd., Torwood Foundry, Larbert, Stirlingshire; Orme, Evans, & Co., Ltd., Wolverhampton; Richmond Gas Stove and Meter Company, Ltd., Warrington; Scottish Central Iron Company, Ltd., Falkirk; Standard Engineering Company, Ltd., Evington Valley-road, Leicester; Stirlingshire Iron and Stove Compony, Bonnybridge, Stirlingshire.

Works Service.—Drainage, etc., at Newmarket: H. E. Ambrose, Gwydir-street, Cambridge; electric lighting at officers' mess, etc., at Dover: V. G. Middleton, Broadway-chambers, Westminster, S.W.; electric lighting at Portland: G. E. Taylor & Co., 7, Suffolk-lane, E.C.; filter beds, drains, etc., at Dreghorn: J. Scott & Brown, 3, Barclay-place, Edinburgh; sewage pumping plant at South Farnborough; Burn Bros., 3, Blackfriars-road, S.E.; work at smithy and foundry at South Farnborough: Crosley & Co., Ltd., South-street, Farnham.

Maintenance of Camps and W.D. Buildings at Shirehampton and Avonmouth.—G. Pollard & Co., Ltd., Wood-street, Taunton.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—At a recent meeting of the Aberdeen Harbour Board the Lands and Fishings Committee reported on the proposed extension of ground at Torry as the site for a shipbuilding yard, for Messrs. John Lewis & Sons, Ltd. The new plan implies the alteration of the line of South Esplanade East, and the area leased to the firm will be increased from 7,018 to 9,600 yds. The report was adopted.

Auckland.—The Plans Committee of the U.D.C. has considered a plan for a proposed garage for the United Automobile Services, Ltd.

Bournemouth.—The Tramways Committee of Bournemouth B.C. is arranging for the immediate erection of a tramways shelter at Poole Terminus. The L.G.B has sanctioned the raising by the B.C. of the sum of £1,000 for cliff protection works. Subject to the consent of the Board of Trade, the B.C. has decided to construct groynes at Undercliff-drive. The Borough Engineer has been instructed to erect refreshment-rooms at foot of East Cliff Lift and at Fisherman's-walk. The following plans have been approved by the Buildings Committee:—New deposits—House, plot 16, St. Alban's-avenue, Mr. E. A. Insley; billiard-room, etc., "Chislehurst," Marlborough-road, Mr. J. A. Longden; house, plot 221, Dunbar-road, Mr. H. Long. Additions, plot 6B, Pine-avenue, Messrs. Burridge & Bovill; additions, "Braemar," Alumhurst-road, Mr. J. R. Tile; covered way, "Attleboro'," Wentworth-avenue, Mr. J. Newbury; house, plot 49, St. Alban's-avenue, Mr. W. King; house, site 33, St. Luke's-road, Messrs. George & Harding; house, corner Glen and Wilfred roads, Mr. C. T. Miles; house, plot 219, Dunbar-road, Mr. E. A. Insley; house, plot 22, Spurgeon-road, Mr. W. E. Bailey; alterations and additions, "Connemarra," Knole-road, Mrs. E. E. Hazard. Re-deposit—Amended plan, winter garden on flat, Old Christchurch-road, Messrs. Plummer Roddis, Ltd.

Bradford.—The Bradford Empire will shortly be closed for alterations and redecorations.

Bristol.—The Docks Committee has granted permission to Mr. S. J. King, acting on behalf of the Cartowners' Association and the Dockers' Union, to erect a shelter for trace horses and their attendants on the quay near Bristol Bridge.

Burryport.—The Council has passed plans of six new houses and one shop near the Derwydd, for Mr. Billings, Swansea.

California.—The Scottish Rite Masons of Sacramento, California, have passed plans for the erection of a temple which will be used exclusively by Scottish Rite Masons, the building of which is to cost £16,000.

Chelmsford.—It was announced at a recent meeting of the Chelmsford R.D.C. that alterations and improvements are to be carired out at Ingatestone Old Post Office.

Crook.—A new surface water drain is to be laid at Woolley-terrace at an estimated cost of £60.

Croydon.—At a recent meeting of the Croydon T.C. the Borough Engineer reported with regard to the Beulah Hill Town-planning Scheme that he had interviewed the principal owners and had prepared draft of a scheme and map which he submitted.

Derby.—The T.C. is to construct a sewer from Osmaston Park-road to the main intercepting sewer, part of which will pass through the Merrils Farm, in order to develop the land acquired by the Corporation.

Dorchester.—The T.C. has approved plans submitted by Messrs. John Groves & Sons, of Weymouth, of proposed alterations to stable and cart-house to the Phœnix, High East-street, and on behalf of Mr. T. Lynes by Mr. F. T. Maltby of proposed alterations to stables in Princes-street to turn them into motor garages.

Dumbarton.—The Western District Committee of the Dumbarton C.C. recently considered a report from a sub-committee on the housing question. It was decided to continue the remit to the sub-committee to enable it to obtain a report upon sites, plans of buildings, estimates, etc.

Dundee.—Dundee Harbour Trustees have had before them a proposal by the Caledon Shipbuilding and Engineering Company, Ltd., for a large extension of their shipyard.

Durham.—Funds are being raised for renovation purposes at the Bethel Chapel, North-road, Durham.

Ely.—The U.D.C. has approved plans, submitted on behalf of the Shell Marketing Company, for a combined office and pumphouse on the premises of the G.E.R. station; also plans of a motor garage, for Mr. H. Downie, and house in Barton-road, for Mr. B. J. Gentry.

Fochaber.—Tenders have been accepted for the erection of a jam factory for Mr Baxter, merchant, Fochaber. The architect is Mr. John Willet, Elgin.

Folkestone.—The T.C. has approved of the following:—Plans, submitted by Messrs. Barr & Egbert (owners) (Mr. F. J. Cox, architect, Messrs. W. Silk & Son, builders) for a temporary hippodrome at the rear of Linden-creecent, as a temporary building; plans submitted by Mr. F. Nicholls (owner, architect, and builder) for additions to 86, Shorncliffe-road. The Council has deferred consideration of the plans submitted by Messrs. Youngs & Old (owners), Mr. A. R. Bowles (architect) for additions to garage, Cheriton-road; also plans submitted by the Central Picture Theatre, Ltd. (owners), Mr. J. Vant (architect), for additions to the Central Picture Theatre, George-lane.

Grantham.—The T.C. has approved plan for the reconstruction of a warehouse at Earlsfields Works, for Messrs. A. & J. Shaw, Ltd.

Hayes.—The U.D.C. has received tenders for the Botwell housing scheme, which have been forwarded to the L.G.B.

Hebburn.—It has been decided to rebuild the Hebburn Colliery Workmen's Social Club. Plans, which have been prepared by Mr. G. R. Smith, architect, South Shields, have been approved by the Hebburn U.D.C

Hexham.—The following plans have been passed by the R.D.C.:—Plans for semi-detached house and shop at Allen View, Catton, for Mr. Geo. Newman, builder; and plans for a new wash-house, and alterations to out-offices, at Barrasford, for the Duke of Northumberland.

Horbury.—At a recent meeting of the D.C. plans were approved for the erection of two cottages in Rayner-street, for Mr. J. Dyson; a transformer shed at Millfield Mills, Horbury Junction, for Messrs. Archer, Ritchie, & Co., Ltd.; and a wooden stable in New-street, for Mr. A. Kershaw.

Huddersfield.—At a conference of delegates of the Huddersfield Trades and Labour Council held recently, the following resolution was carried:—"That the Huddersfield County Borough Council be requested to take steps immediately to build at least 1,000 houses in order to meet some of the requirements of the borough. The houses to be built by a special rate levied for that purpose, and to be built by direct labour, under the supervision of the Borough Engineer."

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* See also our list of Competitions, Contracts, etc., on page 306.

India.—The Sargodha Municipality has submitted to the Punjab Government an application for a loan for the extension of the Sargodha water supply scheme.

Irvine.—Irvine Dean of Guild Court has passed the following plans:—The British Phenoloids Company, for the extension of works at Gailes-road; the Standard Chemical Products Company, Ltd., to erect a crystallising house and store at their works at Boatstobs; the Hosiery Manufacturing Company, Ltd., to erect dining and cloakrooms for employees. Applications by the Scottish Kinemas, Ltd., to erect a picture house, and by Messrs. A. Cunningham, Ltd., to erect a hosiery factory, were continued.

Kirkby.—The U.D.C. has passed plan submitted by Mr. J. Stowe, of two dwelling-houses in Beulah-road.

London.—Plans have been sanctioned for alterations at the Cambridge, Cambridge-circus; Waterloo Coffee House, Haymarket; and the licensed premises, 60, Wardour-street. The justices have sanctioned plans as to certain alterations to the following houses:—Ancient Foresters beerhouse, 282, Southwark Park-road, Rotherhithe, Mrs. Mary Coombs (widow), licensee; Railway Station, Waterloo-road, Lambeth, Mr. E. F. Bugler, secretary. The following cases of proposed alterations to the undermentioned houses were adjourned for a committee of the justices to view premises:—Morning Star, beerhouse, 231, Rye-lane, Camberwell, and the beer, wines, and spirits off-licensed premises, 691, Old Kent-road, Camberwell. The Westminster City Council has had before it a notification from the L.C.C. of an application by Mr. E. Fisher, architect, for consent to a building for the Royal Geographical Society at the corner of Exhibition-road and Kensington-gore. The Royal Free Hospital in Gray's Inn-road has received an anonymous gift of nearly an acre of land, which will be available for an extension of the hospital particularly needed in connection with maternity work and infant welfare. The Licensing Justices have sanctioned plans of alterations intended to be carired out at the Jolly Anglers, 227, Kentish Town-road—licensee, Mr. Harry Rolles.

Lowestoft.—The T.C. has decided to make application to the L.G.B. for sanction to borrow £16,500 to carry out necessary works of reconstruction for foreshore protection, etc., at the North and South Beaches.

Newcastle.—A proposal has been submitted to the City Council for the leasing for ninety-nine years of the Singleton House site in Northumberland-road for the erection of a large building.

Oldbury.—The Public Works and Buildings Committee of the U.D.C. has recommended that the following building plans be passed:—Rev. E. Cato, extensions to chapel, Parsonage-street; Messrs. Accles & Pollock, sixty-four houses, New-street, Rood End; Mr. George Alexander, factory, Rood End-road.

Oswestry.—At a recent meeting of the T.C. the General Purposes Committee recommended that permission be granted to Messrs. E. J. Gittins, Ltd., to erect eight temporary buildings at the rear of their premises in Church-street to be used as motor houses, and that the plan for the erection of house and buildings in Welsh Walls, for Mr. J. E. Morgan Jones, be approved.

Peterhead.—At a recent meeting of Peterhead T.C. a petition and relative plan was submitted by Mr. William and Mrs. Buchan, 19, Ronheads, for warrant to alter the dwelling-house there.

Peebles.—The Perthshire branch of the Scottish Veterans' Garden City Association for the erection of cottages has received £300 from Mrs. Ainslie, Peebles, who wishes this sum to be utilised in the erection of a cottage, to be named the "Charles Alexander Ainslie Cottage."

Perth.—The L.G.B. recently asked Perth T.C. to consider reports regarding the proposed new water supply for the city. The Special Water Committee is inquiring if the L.G.B. would approve of a scheme in which the crude water would be drawn from the River Tay, and has informed them that the Committee has under consideration the question of a subsidiary water supply from artesian wells.

Poole.—The Commissioners of the Harbour Board have approved a scheme of the Corporation to construct a viaduct for carrying water-mains across Holes Bay in the vicinity of Creekmoor Bridge.

Portugal.—A Bill has been presented to the Chamber of Deputies to authorise the Municipality of Sobral de Monte Agraço to sell certain property, with a view to devoting the proceeds to the construction of a municipal slaughter-house, and also, should there be any surplus, a school building.

Ramsgate.—The T.C. has approved the following plans:—For the erection of a shop at No. 13, High-street, owner, Mr. Norman Reeve; for the erection of two houses, Dumpton Park-drive, owner, Mr. W. W. Martin.

St. Helens.—At a recent meeting of the T.C. a letter was submitted from the London and North-Western Railway Company stating that the Refractory Zinc Ore Treatment Company, Ltd., require a site for a new works.

Spain.—The *Gaceta* of March 23 contains a call for tenders by the "Dirección General de Prisiones" for the construction of cells, sick rooms, and four workshops in the centra
of the port of Santa María (Cadiz). T
mated cost of the works is 647,860 peseta
£26,000).

Wallsend.—At a recent meeting of
T.C. the Town Clerk and Borough Surve
instructed to go into the question of p
a town-planning scheme for the eastern
of the borough, and the Town-Planni
mittee reported that the line of the
through road from Newcastle to Tynem
meeting with the approval of the majori
authorities interested.

Wareham.—The T.C. has conside
estimate from the Surveyor, amounting
for the repair of the road from the top
street to the Union, and the work is ex
be commenced shortly.

Wellington.—At a recent meeting of
plans and estimates for proposed alter
buildings were submitted by Mr. Flemi
tect), amounting to £665. These are to
to the L.G.B. for approval.

Yiewsley.—The U.D.C. has approved
new stables at the rear of York-plac
street.

BUILDING AND FURNISHING MATERIAL WORKS, SPAIN.

The *Gaceta de Madrid* of March 31
the text of a Royal Decree grantin
ordinary credits in favour of certain
Government Departments, as follows

Ministry of War.—Barrack cons
and improvement works, etc., 500,000

Home Office.—Works in the National
of Hygiene of Alfonso XIII., 300,000
works in the Cancer Institute, 50,000
works in the Mahon Hospital, 150,000

Ministry of Public Instruction a
Arts.—Advances to municipalities for
struction of new schools, 600,000
extension and improvement works in
under the control of the Ministry,
pesetas.

Ministry of Fomento.—Road cons
works, 3,000,000 pesetas; new road cons
1,000,000 pesetas; road repair works,
pesetas; construction of agricultural en
school 500,000 pesetas. (25 pesetas = a

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NERAL BUILDING NEWS.

LDIERS' CHURCH, SOUTHAMPTON.

nporary church and institute at the amp, at Southampton, has recently npleted. The building is 65 ft. by 30 ft., of a recess, at the opposite end to the , which is set apart as the sanctuary. side of this is a small vestry, and on the store for general purposes. The main is through two porchways, into a e, connecting with the church and . The artificial lighting of the struc- arried out by means of electricity, and re provided for the sitting accommoda- to about 300 persons. The plans for p Church and Institute were prepared A. F. Gutteridge, and the erection of ding was carried out by Messrs. G. E. Son.

ON UNIVERSITY COLLEGE EXTENSION.

ties for carrying out research work versity College have recently been l by the raising of new chemical ries on a site immediately to the north main college buildings. The new ries have been erected from designs l by Professor F. M. Simpson, F.R.I.B.A. fronts upon Gower-place and has a of 315 ft. The area covered by the s is about 17,500 sq. ft. The building es a half-basement, ground, first, and loors. The western portion of the half- t is occupied by the laboratories and -rooms for physical chemistry. At ern end is a room about 50 ft. square, designed for large-scale operations. g this room is a workshop for the con- of apparatus for the departments of y and physics and for the use of . On the same floor are rooms for the on of liquid air and hydrogen for low- ture research, and for the main chemical The entrance hall and main staircase e middle of the ground floor. To the two lecture theatres and preparation- he library, the private room and labora- the Professor of Inorganic and Physical ry. Immediately to the west of the hall is the museum, and next to that nain inorganic laboratory for second- udents, with rooms adjoining. The ry and the balconies have special fan on. Beyond this laboratory is a f research-rooms. On the first floor, ds, are the private room and laboratory rofessor of Organic Chemistry. Adjoin- are the organic laboratory, combustion- d balance-room at one end, and a group ch-rooms at the other. To the east of staircase are the organic theatre, the chemical stores, an apparatus store, oom, a spectroscope-room, a service- nd lavatories. At the east end of the floor is the laboratory for first-year . West of the main staircase is the ent of pathological chemistry.

TRADE NEWS.

's latest patent "air-pump" ventilators n applied to St. John's Church, Simpson- dmore, Portsmouth.

New Savings Bank, Leicester, is being with Shorland's warm air ventilating Manchester grates by Messrs. E. H. l & Brother, Ltd., of Failsworth.

g the many uses to which reinforced has been applied is in the foundations s, whether finished with wood, granite sphalt, or other material, and it is y useful in cases where the foundations l. The British Reinforced Concrete ring Company, Ltd., whose head office ckinson-street, Manchester, which has ffices in 20, Victoria-street, London, have much attention to the matter, and little doubt as to its economy, especially present prices of labour and material. g the cost of laying, the cost of rein- nt is about 1s. 3½d. a superficial yard, vith Portland cement concrete at 20s. c yard, and the cost of excavating and including finding a shoot, works out 28s. 6d. per cubic yard, so that 1s. 3½d. n reinforcement would pay for only thickness in extra concrete.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9½	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	8½	7½*	7½	7½
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	9½	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10½	9¾	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	9½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5¼	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10½	10	10	8½	7½	7½	8
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	9½	10½	9	8½	8½	9
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	9½	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9½	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10½	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9½	9½	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	11	8	10	8	7½	7½	7½
Worcester	8½	9½	9½	9	9	9	7½	6½	6½	6½
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

THE SURVEYORS' INSTITUTION:

TOWN PLANNING.

IN our last issue we gave the first part of a paper read by Mr. W. R. Davidge at the Surveyors' Institution on the 10th inst., entitled "The Principles and Position of Town Planning." We now give a further part of this interesting lecture.

Zone System and Commercial Districts.

"The division of a district into building zones in which different building regulations apply has not found favour in English practice, although separate districts for buildings of the warehouse or factory class have been adopted at both Ruislip and Birmingham.

From the point of view of protection of property-owners in residential districts, some form of restraint as to the location of commercial buildings is clearly necessary, and, so far as the Act has gone, the constitution of separate areas for factory and commercial purposes has been carried out without difficulty.

As so many of us are aware, however, the real test of such restrictions will be felt in the next generation. With the continual growth and prosperity of a town the commercial area will surely expand, and unless adjacent space is provided for expansion the business side of the town will necessarily overflow into the residential quarters. In all old centres this alteration of use is continually before our eyes. In New York, within the last few years, business which formerly was done in Twenty-third-street has now moved up as far as Forty-second-street, and an entirely new shopping district created.

Even in London the one-time quiet residential Hanover-square is rapidly assuming a commercial character, and the once peaceful quiet of Soho-square has long been broken into by the pickle factory. Such changes are in the nature of things, and, however hard and fast the restrictions of a town-planning scheme may be drawn, it is evident that unless the plan itself also provides for extension mere legal restrictions will have no more force than the out-of-date paper restrictions of many one-time high-class residential estates, more honoured in the breach than in the observance.

Provision must therefore be made for the gradual expansion of commercial districts.

The phenomenon of the overflowing of business into the residential areas of a town is constantly before our eyes, but it is curious to note that in nearly all towns, no matter how old, the heart of the business community still has its nucleus in the area of the original settlement. No matter how Oxford-street or Kensington High-street may flourish, the City of London still holds its own so far as the business community is concerned. The same is true of New York, where the nerve centre is still in the original commercial settlement at one time bounded by Wall-street.

Increased Height of Business Premises

It is the endeavour to crowd as many office buildings as possible near this commercial centre that has created the "skyscrapers" of Lower New York. This tendency towards increased height of buildings in commercial centres is equally noticeable in such cities as Sydney, Melbourne, Winnipeg, Vancouver, and even in comparatively small cities like Regina. *There is everywhere a tendency to increased height of business premises.*

Control of Building Heights.

The New York authorities have given much consideration to the important question of regulating the height of buildings. In Lower Manhattan there has for many years been a growing tendency towards the erection of tall "skyscrapers," mostly office buildings. The excuse for this has been the limited area available in the older commercial quarter of the city, but the real purpose has in many cases probably been for advertisement purposes. The Woolworth Building at present easily holds the record. When I visited the Woolworth Building I entered the lift, and was carried up by express "elevator" to the fifty-first story. Then I changed lifts and went up another four stories—fifty-five stories in all. As an investment, however, hardly any of these tall buildings pay. Such buildings, too, only add to the existing congestion, and, to emphasise this point, it is stated that if the 10,000 occupants of the Woolworth Building all left off work to go home at one time by the nearest electric railway it would take the railway's full capacity for twenty-two minutes to get them all away—and this from only one building. The City of New York is already spending some £73,000,000 in the construction of electric subways, and in the interests both of economy and public health the city has now decided to discourage the erection of buildings above a reasonable height.

In this connection the Report of the Heights of Buildings Commission for New York City gives some interesting information, proving conclusively that the very tall building is not a paying proposition:—

"The cost per cube foot for a skyscraper is given as 2s. 6d. to 3s. 1½d. (60 to 75 cents), as compared with 1s. 8d. to 2s. 1d. (40 to 50 cents) per cube foot for a low building of the same class. The loss of space on the ground floor taken up by the thirty or so lifts, and as much more for the necessary lobbies, is even more serious. Ground floor space in such buildings often rents at £4 per square foot ($20), and the loss of something like 4,000 sq. ft. of floor space means an annual loss of £16,000 on this floor alone. A ten-story building would save two-thirds of this. The loss on the upper floors, due to the space taken up by lifts, etc., also amounts to a surprising total. This means that tall buildings reach a limit beyond which the loss in space on the lower floors more than counterbalances the profit on the upper floors. Every building, according to its shape, size, location, and use, has its economic limit.

Even though a high building may pay a moderate return as long as it stands alone, and is surrounded only by low buildings, so that all its floors are light and attractive, the result is bound to be very different after it is surrounded by similar buildings, shutting off light and reducing rentals on the lower floors."

In the interests of traffic facilities, public health, and public economy the height of buildings should be kept within reasonable limits.

It is interesting to note, however, that even in Central New York (Manhattan) the average building height is still only 4·8 stories. The buildings over ten stories constitute only 1·11 per cent. of the total. Out of 92,749 buildings in Manhattan there are only 1,048 buildings over ten stories in height; ninety buildings over seventeen stories in height; fifty-one buildings over twenty stories in height; nine buildings over thirty stories in height.

Limits of Height.

The *limits of height of buildings* in various cities are at present as under:—

London.—80 ft.

Paris.—In streets less than 40 ft. wide, street width + 20 ft. In streets over 40 ft. wide, 58·64 ft. + ¼ (width — 40 ft.).

Berlin.—Maximum 72·2 ft. (22 mètres).

Boston.—District A, 125 ft., or 2½ times width of street. District B, 100 ft., or 1¼ times width of street. (Buildings over 80 ft. only allowed on streets over 64 ft. wide.) Special restriction to 70 ft. on blocks adjoining State House.

Washington.—Pennsylvania-avenue.—160 ft.; other business streets, 130 ft., or street width + 20 ft.; residence streets, 85 ft.; or streets over 70 ft. wide, street width — 10 ft.; streets 60 ft. to 70 ft., 60 ft.; streets less than 60 ft., street width.

Other American Cities.—Baltimore, 175 ft.; Chicago, 200 ft.; Los Angeles, 150 ft.; Salt Lake City, 125 ft.; Toronto, 130 ft.

New York.—Limit of height of apartment and tenement houes, 1½ times street width.

The New York Commission recommend the limit of height for all buildings within 100 ft. of Fifth Avenue to be 125 ft., and that the general restriction for residential districts should be 1½ times street width, *i.e.*, for 60-ft. streets height would be 90 ft., and for business streets 2 times street width with maximum of 300 ft. A number of American cities, including Baltimore, Milwaukee, Minneapolis, and Los Angeles, have in recent years established separate residential and industrial districts.

Limitation of Houses per Acre.

In England, although land values in
towns have reached a considerable he
there has been no great demand for ver
buildings, and it is probable that the pr
height limits, where established, are suffi
to check this tendency. The limitation o
number of houses per acre has, however,
enthusiastically taken up in this country.
effect of such a limitation must be at least
fold. It tends first to spread the town,
consequently the values, over a larger area
by restricting the use to which land is put
to that extent decrease the value per ac
land which is already ripe for building.
the same time it will tend to give a corres
ing increase of value to land further fron
town. Its effect on the already over
city areas cannot fail to be beneficial. fo
fixing a standard of suburban developm
a high standard of amenity and a comparat
low standard of price—it will be finan
impracticable to force up values in the bu
areas above a reasonable limit, and fo
same reason it will not pay to unduly inc
the congestion of building. The diffic
of fixing a suitable "land unit" are, how
considerable, and both the Ruislip and Bir
ham systems are worthy of study in this re

Twelve houses to the acre is a reaso
maximum, but where land is already
developed for cottage property as man
eighteen to twenty houses per acre have
allowed in the case of the first two Birmin
schemes. In any case it is evident that
discretionary power to exceed the lim
particular cases or particular parts of an
will certainly be taken in practice.
common sense, however, in both the land
and the municipality, no difficulty should
in administering an admittedly difficult

In some of our colonies, notably in Queen
and in New Zealand, there has for many
been a statutory limitation of the mini
size of plot which can be bought or sold
in both colonies this has been fixed at 16 pe
or 1-10th of an acre. This practical limit
of ten plots to the acre has, however.
largely dictated by land registry considera
and there is no restriction on the numb
buildings per acre. In the Colonies,
nearly every house has its quarter acre
need has not yet been felt for restriction
it is remarkable how, even in the Colonie
large blocks are continually being subdi
into smaller and smaller parcels.

THE CAUSES OF DEVELOPMEN

Influence of Geographical Position.

There is a reason for most things, and
least for the position of towns where they
In most cases the community has grow
either because of some natural advanta
the possession of a coal mine, or a well,
spring, or a ford across a river, or a hi
defensive purposes, or because of its pos
at a road junction, or along some impo
line of route.

The commercial success of the town
less dependent upon a continuation of
conditions. The weekly market pe
attracts business; the opening of a factory
new industry brings an influx of people
the causes which operate to bring about
prosperity are deep set in the natural, geogr
cal, and strategical position of the town.

Private residents will not be attracted
town which is a blot on the landscape,
businesses will not come unless there is bus
to be done. Any town plan, therefore, fo
development of a town must *aim first at m*
the utmost of all such natural and geogra
advantages, and then at guiding the develop
into the most advantageous lines for the bene
the town and its residents.

Transit Facilities.

The provision of efficient and up-to
means of transit is one of the most impo
items in the development of towns; yet, st
as it may appear, this all essential det
omitted from the calculations of many wou
town-planners.

On more than one occasion during my r
visit to the Colonies I was asked to advise
the lay-out of estates or townships many

m any existing community, with no
aison d'être of their own, and which
rdly any circumstances could become
orting and self-contained. It is evi-
t, *in the absence of any special com-*
r natural advantages, or of facilities for
mmunication with existing centres, a
y cannot expect development.
t not be thought from this that any
rden cities" cannot be created, but
only be successfully created if they
re enough commerce or industry to
m self-supporting, or if they are linked
isting communities by easy and rapid
f some description, so that the new
ty can serve either as a branch industry
alth resort or dormitory to one or more
owns. *Rapid transit, therefore, is all-*
to the success of any town
erica, where distances are so immense,
sit question inevitably bulks largely,
ially in recent years American towns
en more and more attention to the
of the quick distribution of passengers
outlying districts to and from the
business portions of a town.
d transit" is therefore one of the
iderations of our American cousins in
ng the problem of town development,
indeed strange that we in this country
dimly beginning to realise this in our
after new and improved arterial roads.
ds and motor traffic are, however, only
of the problem, and in America many
re giving their attention to the solution
nsit problem as a whole."

Rapid Transit.

the most useful investigations in this
and one which has been of great
an example to other towns, was that
the Philadelphia Transit Commissioner
nd his report gives a most exhaustive
prehensive survey of the transit pro-
far as Philadelphia is concerned.
tudy has been given to the transit
in the United States generally, and
of its effect on town development.
aturally found that property in the
hood of a "rapid transit line"
more rapidly than other parts of the
d if only one such line exists it will
absorb the greater part of the normal
the town.
uestion of the amount of traffic to
e construction of a tube railway or
subway will depend upon local
cal and commercial conditions, but
rious fact that, so far as this country
ned, no town with a population of
half a million has ventured to introduce
lway or electric "rapid transit" line.
ious parts of the Continent there have
ing for some years now a combination
c light railway and tramway which
e far-reaching results. Many of these
ently ordinary tramcars and trailers
they are in the town, but as soon as
h the outskirts they travel on a special
heir own. With stops five miles or so
average speed of upwards of thirty
hour is easily obtained. This system
dy proved of great value in bringing
s and country produce into the cities,
d be of great service in distributing
ns if its use were more widely practised.
on special tracks of this description
seen in the outskirts of Sydney, and
urse, in many parts of Holland, though
hese cases the stops are too frequent
the full use of rapid transit facilities.
concise and comprehensive report on
assenger Transportation Problem"
cently issued by the General Manager
anchester Corporation Tramways, and
excellent summary of what has so far
eved in this direction in America and
ipal cities of the Continent.
is, however, still a wide field for
ion as to the methods of transit most
or particular localities, and it is clearly
ble to do more than generalise one or
iples upon which most authorities are
-

tric "subways" or *tube railways can*
y be commercially successful where the traffic is large and constant. Sub-surface railways are therefore only suitable for communities with a population of over half a million or more. Overhead railways are almost equally costly as tubes, and by reason of their noise and ugliness are generally regarded as unsuitable to English conditions.

(2) *Tramways and motor omnibuses are of more service when run in conjunction with rapid transit lines.* In Boston, U.S.A., tramway subways, somewhat similar to that under Kingsway, have been in operation for some years, but, owing to its narrow streets and congested site, the problem in Boston is a very special one.

(3) *Special tracks should, if possible, be provided for tramways,* particularly outside the built-up areas. Special tramway tracks on wooden sleepers laid in grass have been very successful in many parts of the Continent, and they are now being introduced in the new arterial roads recently constructed in the outskirts of Liverpool.

Arterial Roads.

For many people town planning begins and ends with the planning of roads, and there can be no gainsaying that the main roads into and out of a town are the skeleton on which the plan will hang together. They may, in some instances, be the "bones of contention," but all will be in agreement with the general principle of fixing the routes needed for new main roads, including, of course, reasonable circumferential and cross-roads. *The routes for arterial roads should be laid down at an early stage in the town plan, and definitely secured or sterilised from other uses.*

It is remarkable how many of our large towns are now considering this problem of arterial roads. There is evident, too, in this country a tendency towards "circular roads" in addition to radial routes, which, however, must always take the bulk of the traffic. Liverpool has already constructed a fine circumferential boulevard. Birmingham has prepared a scheme showing a circumferential road 100 ft. wide practically encircling the city. The London Traffic Branch of the Board of Trade has also given very considerable attention to this matter, and the conferences of municipal authorities in Greater London have, with the assistance of this Institution and other professional bodies, at last agreed upon a comprehensive scheme of main arterial and circumferential roads for Greater London, the total length of the proposed roads approximating a hundred miles. The financing of the proposals where so many authorities are concerned is, however, a difficult matter, and the signs all seem to point to the necessity for making main roads a national matter. In most other countries "*routes nationales*" have long been an accomplished fact, and the importance of the national point of view must not be lost sight of.

The Road Board established by the Government for this purpose is a recognition of this principle, and it is to be hoped that in the stress of these stormy times the principle of national responsibility for the "King's highway" will continue to be maintained. *Main roads are the property of the nation and should be a national matter.*

Roads and Road Widths.

Much discussion and many conferences during the past six years have taken place on the question of road widths and construction, especially perhaps as to the allocation of space for various classes of traffic.

The general principles arrived at may, I think, be reasonably summarised as follows:—

To secure easy and rapid transit—

(1) *Classification of roads is desirable.*
(2) *Provision for fast and slow traffic (fast traffic should not have to slow up for cross-traffic), and separate tracks for tramways.*
(3) *Sufficient width of roadway for the traffic, but not too wide to be maintained.*
(4) *Sufficient width between buildings for all future purposes.*

To secure the amenity of the highway—

(1) Good views from the road—preserving view points.
(2) Good views of the road—trees, but not too thickly planted.
(3) Pleasant walks alongside the road—grass and trees where possible.
(4) Pleasant halts by the way—an occasional village green or open space.

It should be borne in mind that *estate development is not necessarily an object of main roads.*

And in the lay-out of estates the principles laid down in my paper at this Institution six years ago still hold good, viz.:—

(1) Main routes must take the direction required by the traffic and contour of the ground.
(2) Geometrical planning is not necessarily satisfactory.
(3) Long straight streets, when adopted, should have a definite motive.
(4) Slight curves or irregularities in frontage lines and building lines may often be adopted with advantage.
(5) Line of sight should in most cases be restricted within reasonable limits.

Relaxation of By-laws.

A very important point on which most people are now agreed is, that, *while it is desirable to have a minimum distance between the building lines, a hard-and-fast by-law width is undesirable* whether it be 40 ft. or 50 ft. (or 66 ft. as in the Colonies).

The power to fix building lines is important.

The width of macadam or roadway paving provided should be dictated by the use to which the street is put.

In residential streets the remaining width available may reasonably be devoted to grass margins and tree planting.

The *relaxation of by-laws,* allowed by the Act to be introduced into town-planning schemes, may also in some cases be usefully applied to the by-laws dealing with buildings. The by-law, for instance, requiring party-walls to be carried above the roof, might in most cases reasonably be waived, and there is also something to be said for the suggestion that in country districts wooden buildings might be permitted subject to reasonable restrictions Even under the London Building Act it is possible to build a wooden house provided it is 30 ft. from the adjoining property or any other building, and it should be at least possible to do the same in the country.

Internal Improvements.

For some years now it has been felt *that there should be some means of extending the principles of the Town Planning Act to the internal or built-up area of towns,* but many difficulties confront us in this direction, and it is probable that for some years to come internal street improvements will have to be the subject of special enactment in each case.

Some extension to the whole country of the principles of the Metropolitan Paving Act, 1817 (*Michael Angelo Taylor's Act*), by which local authorities in London can by simple resolution purchase land for street improvement, *would undoubtedly greatly simplify the procedure of local authorities.*

Compulsory Town Planning.

Another point which has been much discussed is as to the desirability or possibility of making town planning compulsory, and it is probable that all will be agreed that *the time has not yet come for compulsory town planning.*

In Massachusetts and other States the appointment of a town-planning board is compulsory for all towns with a population of over 10,000. In Canada the Nova Scotia Town Planning Act, passed in April, 1915, makes town planning compulsory for the whole of Nova Scotia, and this experiment will be watched with interest.

Progress in the Colonies and India.

The other Canadian Provinces which have adopted special town planning Acts are New Brunswick and Alberta in 1912. It is probable that the remaining provinces will shortly follow suit, and the same may be said of the various Australian States and the New Zealand Government. In India the Bombay Government has already led the way in this respect.

(*To be continued.*)

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk** (*) **advertised in this number**: Competitions, —; Contracts, —; Public Appointments, —; Auction Sales, xvi. Cer conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those wi to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while e endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

April 20.—**Walker-on-Tyne.**—Painting.—The Walker Co-operative Society, Ltd., Lamb-street, Walker-on-Tyne, invite tenders for the painting of the Society's business premises and dwelling-house property situate in Lamb-street and Wharrier-street, Walker; also their business premises and dwelling-house property situate in Welbeck-road. Specifications, etc., at the office, Lamb-street, Walker.

April 21.—**Huntingdon.**—Wall.—For the re-building of a wall at the Huntingdon Workhouse. Particulars from the Master.

April 22.—**Lowca.**—Houses.—For the erection of two dwelling-houses in Stamford Hill-avenue, Lowca, for the Harrington Coke Ovens Company, Ltd. Plans and specifications can be seen at the office of Mr. Charles W. Eaglesfield, architect and surveyor, Gordon-street, Workington.

April 22.—**Wexford.**—Cottages.—For building nine single labourers' cottages for the R.D.C. Particulars of the Council's Engineers, Messrs. Donnelly & Moore, 36, Nassau-street, Dublin, or of Mr. Nicholas Kehoe, Clerk of Council.

April 27.—**Navan (Co. Meath).**—Converting.—For converting the military barracks at Navan, Co. Meath, into a school and residence for the De La Salle Brothers. Plans, etc., can be seen at the Presbytery, Navan, with the Administrator, the Rev. J. J. Poland, or at the office of Messrs. William H. Byrne & Sons, architects, 20, Suffolk-street, Dublin.

April 28.—**Abersychan.**—Garage, etc.—For the erection of a garage and stables situated in "Steep Field," Abersychan, near Pontypool, for the Abersychan Co-operative Society, Ltd. Plans, etc., of Mr. C. F. J. Wilton, architect and surveyor, Midland Bank-chambers, Pontypool.

May 1.—**Cwm.**—House.—For the erection of caretaker's house at Duffryn Schools, Cwm, for the Ebbw Vale E.C. Plans, etc., on payment of £1 deposit in P.O.'s, of Mr. T. J. Thomas, the Town Surveyor.

May 1.—**Wigan.**—Extensions.—For an extension of the Market Hall. Specification, etc., of Mr. A. T. Gooseman, Borough Engineer, King-street West, Wigan.

May 2.—**Bradford.**—Plumbing.—The Bradford Corporation invite tenders for plumbers' work required in the erection of sanatorium buildings at Grassington. General conditions of contract, etc., of the City Architect, Town Hall, Bradford.

May 4.—**Langley Moor.**—Cemetery Extensions.—For the construction of boundary walls, iron railing, drainage, and road-making in connection with Waterhouses Cemetery, for the Brandon and Byshottles U.D.C. Particulars of Mr. Geo. G. Donkin, Surveyor, Langley Moor.

FURNITURE, MATERIALS, etc.

April 20.—**Govan.**—Materials.—Supply to the Govan Combination P.C. and Govan District Board of Control of builders' materials, etc. Forms of tender, etc., of the Subscriber, Mr. John Mitchell, Inspector and Clerk, 7-8, Carlton-place, Glasgow.

April 24.—**Lochgilphead.**—Paints, etc.—Supply to the Argyll and Bute Asylum, Lochgilphead, for twelve months from May 15, 1916, of paints and oils, timbers, etc. Schedules to be had on application.

April 26.—**Cork.**—Paints, etc.—Supply to the Cork Harbour Commissioners of paints and oils, nails, screws, and files. Forms at the Engineer's Department, Harbour Commissioners' Offices, Custom House-street, Cork.

April 29.—**Glasgow.**—Materials.—Supply to the Corporation Hospitals Department of plumber, engineer, and joiner materials. Forms of specifications from the House Steward at the Hospital, Belvidere, London-road

ENGINEERING, IRON, AND STEEL.

April 21.—**Dundee.**—Steel Work.—For the execution of steel work for the erection of store at Dudhope Crescent-road, Dundee, for the Corporation. Schedules of quantities, etc., of Mr. H. Richardson, M.Inst.E.E., General Manager and Engineer, Electricity Department, Dundee.

April 21.—**Dundee.**—Steel Work.—For the execution of steel work of roof principals for contractor house, No. 2 pump room, Carolina Port, for the Corporation. Schedules of quantities of Mr. H. Richardson, M.Inst.E.E., General Manager and Engineer, Electricity Department, Dundee.

April 26.—**Walthamstow.**—Water Softening Plant.—Supply to the U.D.C. Electricity Department of a water softening plant. Specification, etc., from Mr. G. R. Spurr, Electrical and Tramways Engineer, Priory-avenue, Walthamstow. Deposit, £1.

April 26.—**Warrington.**—Boiler Plant, etc.—The Electricty and Tramways Committee invites tenders for the following:—(1) Boiler plant; (2) economiser. Specifications, etc., of Mr. F. V. L. Mathias, Borough Electrical and Tramways Engineer, Howley, Warrington Deposit, £1 1s.

April 27.—**Dublin.**—Carriage Under-frames.—The Great Northern Railway Company (Ireland) invite tenders for twelve steel carriage under-frames, 58 ft. long. Copies of the specification, etc., of the Secretary at Amiens-street Terminus, Dublin. Deposit, 10s.

April 28.—**London.**—Heating Accessories.—The Commissioners of his Majesty's Works, etc., invite tenders for the supply of steam and hot-water heating accessories, etc. Forms of tender, etc., of the Controller of Supplies, H.M. Office of Works, King Charles-street, Westminster, S.W.

April 28.—**West Hartlepool.**—Extension of Boiler Plant.—Erection of a circular brick chimney shaft, 100 ft. in height, in connection with the Electric Power Station, adjacent to the Seaton Carew Ironworks, for the Corporation. Plans, etc., of Mr. Nelson F. Dennis, M.Inst.C.E., Borough Engineer, Municipal-buildings.

ROAD, SANITARY, AND WATER WORKS.

April 26.—**Birmingham.**—Tar Macadam.—For coating with tar macadam the carriageways of certain portions of roads, having a total length of about ten miles, together with other work connected therewith, for the Public Works Committee. Drawings, etc., of Mr. Henry E. Stilgoe, M.Inst.C.E., City Engineer and Surveyor, The Council House, Birmingham. Deposit, £2.

April 26.—**Felling.**—Paving, etc.—Fo channelling, sewering, kerbing, and c of back streets at the rear of Smokey Sunderland-terrace, Wardley. Plans, et Surveyor, Council Buildings, Felling-on

April 26.—**Kent.**—Rag and Block Supply to the Justices and Commiss Sewers for the limits extending from G Bridge to Sheerness, and thence along Medway to Penshurst in Kent, of good free from hassock, and large block sto E. L. Baker, Clerk to the Commissio chambers, Rochester.

April 26.—**London.**—Granite.—Suppl Lambeth B.C. of broken granite. M Penny, Town Clerk, Lambeth Town H ton-hill, S.W.

April 27.—**Dublin.**—Gravel, etc.—S pit gravel and pit sand for the Co Specifications, etc., from the City 28, Castle-street, on payment of 1s. form.

Auction Sales.

* May 2.—**Stoke Newington.**—Messrs Stanhope, & Co. will sell by auction premises, the stock of a builder, contra decorator.

* May 10.—Messrs. Churchill & S sell by auction, at the Great Hall, W House, Old Broad-street, E.C., an a of deals, battens, boards, timbers, etc.

* May 23.—**Rotherhithe.**—Messrs Smith, Oakley, & Gerrard will sell by at the Mart, a Thames-side wareho factory premises.

TO CORRESPONDENTS.

NOTE.—All communications with respect and artistic matters should be addressed EDITOR" (and not to any person by na relating to advertisements and other exclusive matters should be addressed to THE BUILD and *not* to the Editor.

All communications must be authenticat name and address of the sender, whether for or not. No notice can be taken of communications.

The responsibility of signed articles, le papers read at meetings rests, of course, with t

We cannot undertake to return rejected c tions; and the Editor cannot be responsible fo photographs, manuscripts, or other docume models or samples sent to or left at this of he has specially asked for them.

All drawings sent to or left at this office for tion should bear the owner's name and either the face or back of the drawing. inconvenience may result from inattention t

Any commission to a contributor to write or to execute or lend a drawing for publicatio subject to the approval of the article or dra received, by the Editor, who retains the rig it if unsatisfactory. The receipt by the a proof of an article in type does not necessari acceptance.

N.B.—Illustrations of the First Premiated any important architectural competition will accepted for publication by the Editor, wh have been formally asked for or not.

[Those with an asterisk (*) are advertised in this issue.]

S CURRENT OF MATERIALS.

to the exceptional circumstances which t the present time, prices of materials confirmed by inquiry.]

our last issue sheet lead has advanced.—ED.

im in this list is to give, as far as possible, the rices of materials, not necessarily the highest Quality and quantity obviously affect prices which should be remembered by those who of this information.

BRICKS, &c.

00 Alongside, in River Thames.	£ s. d.
ks	2 0 0
ocks for Facings	2 12 0

000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
	1 10 0	Best Blue Pressed	
ham		Staffordshire ..	5 0 0
	3 12 0	Do. Bullnose ..	5 5 0
Pressed		Best Stourbridge	
Facing	5 5 0	Fire Bricks ..	4 15 0
RICKS—			
White,		D'ble Str'tch'rs	18 17 6
and		Double Headers	15 17 6
Glazed		One Side and	
rs ..	13 7 6	two Ends	19 17 6
	12 17 6	Two Sides and	
ullnose		one End	20 17 6
½ in.		Splays and	
	16 17 6	Squints	18 7 6

ond Quality £1 per 1,000 less than best.

	s. d.	
allast	7 9	per yard, delivered.
d Pit Sand	8 0	,, ,, ,,
ed Sand	9 0	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
and Cement	2 5 0	..	2 8 0

ls. alongside in 80-ton lots.

2s. 6d. per ton extra on above.

d Blue Lias Lime.... 1 5 6 at rly. depôt.

e cement or lime is exclusive of the ordinary charge for sacks.

e Lime .... 18s. 0d. per yard delivered.

e Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
NE — delivered in railway trucks at rne Park, Paddington, G.W.R., or ambeth, G.W.R., per ft. cube	1 7
elivered in railway trucks at Nine . & S.W.R., per ft. cube	1 8¾
elivered on road waggons at Nine Elms	1 9¼

STONE—

Whitbed, in random blocks of 20 ft. ge, delivered in railway trucks at ourne Park, G.W.R., South Lambeth, R., or Nine Elms, or L. & S.W.R. per ft.	2 5½
delivered on road waggons at Pimlico or Nine Elms Depôt, per ft. cube ..	2 6½

asebed, 2d. per ft. cube extra.

LOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
n blocks ..	2 0	Closeburn Red	
ocks	1 7¼	Freestone	2 2
n blocks	2 4	Red and White Mans-	
Dale in		field Random block	2 9
	2 5	Yellow Magnesian	
		Limestone do. do.	3 3

NE—*Robin Hood Quality.*

. Cube, Delivered at Railway Depôt.	s. d.
andom blocks	3 4

Ft. Super., Delivered at Railway Depôt.

two sides landings to sizes (under per.)	2 5
d two sides ditto, ditto	2 8
two sides slabs (random sizes)	1 0½
n. sawn one side slabs (random sizes) ..	0 8¼
in. ditto, ditto	0 6¾

K—

Ft. Cube, Delivered at Railway Depôt.	
andom blocks	3 0

Ft. Super, Delivered at Railway Depôt.

two sides landing to sizes (under 40 ft.	2 3
d two sides ditto	2 7
two sides slabs (random sizes)	1 0
ced random flags	0 5

TILES.

Per 1,000 f.o.r. London.

ine-made tiles or hand-made sand-tiles from either Broseley or	£ s. d.
shire district	2 12 6
l ditto	2 15 0
lley tiles (per dozen)	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

		£ s. d.
Bangor slates,	20 by 10	11 16 0
ty ,,	,,	11 10 0
,,	16 by 8	5 15 0
Portmadoc,	20 by 10	11 13 6
ty ,,	,,	11 3 6
,,	16 by 8	5 15 0

WOOD.

prices should be confirmed, as the market is *changing daily.*

LDING REDWOOD.

orted sizes.	Per standard.	
n. by 12 in., 4 in. in., 3 in. by 11 in., by 9 in., and 2 in. in.	33 10 0	34 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard.	
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32 10 0 ..	33 10 0
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	31 10 0 ..	32 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	
Seconds: building quality deals, battens, boards, and scantlings	1 0 0	less than best.
Best Middling Dantzic and Memel Fir Timber Logs	Per load of 50 ft. cube.	
(average specification) ..	10 0 0 ..	—
Seconds do. do.	9 10 0 ..	—
9 in. to 10 in. do.	8 10 0 ..	—
6 in. to 8 in. do.	8 0 0 ..	—

Stocks very limited.

	Per load.	
Sawn pitch pine logs (about 35 cu. ft. average)	12 0 0 ..	13 10 0
Do. 6 in. to 10 in.	10 0 0 ..	11 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0 ..	7 0 0
	Per standard.	
Best Pitch Pine Deals	34 0 0 ..	35 0 0
Under 2 in. thick	0 10 0	extra.

JOINERS' WOOD.

White Sea Second Quality Red:		
4 in. by 11 in.	39 0 0 ..	40 0 0
3 in. by 11 in. and 2 in, by 11 in.	38 0 0 ..	39 0 0
4 in. by 9 in.	37 0 0 ..	38 0 0
3 in. by 9 in. and 2½ in. by 9 in.	36 0 0 ..	37 0 0
9 in. by 11 in. boards	1 0 0	more than deals.
7 in. and 8 in. battens	33 0 0 ..	34 0 0
7 in. and 8 in. boards	1 0 0	more than battens.
Third quality	2 0 0	less than best.
Fourth quality	£2 to £3	less than seconds.
Archangel White Deals—		
Best 3 in. by 9 in. and 10 in. and 11 in.	36 0 0 ..	37 0 0
Seconds, do.	2 0 0	less than best.
U.S. Battens	30 0 0 ..	32 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.	
1¼ in. by 6½ in. planed and shot	1 16 0 ..	1 19 0
1¼ in. by 6½ in. planed and matched	1 16 6 ..	1 19 6
1 in. by 6½ in. planed and shot	1 9 0 ..	1 12 0
1 in. by 6½ in. planed and matched	1 9 6 ..	1 12 6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1 4 0 ..	1 6 0
1 in. by 6½ in. do.	1 10 6 ..	1 12 0
⅝ in. by 6½ in. do.	1 0 0 ..	1 1 0

	Per standard.	
Columbian or Oregon Pine, best quality	42 0 0 ..	44 0 0
Yellow Pine—First, regular sizes	57 0 0	upwards.
Oddments	39 0 0	,,
Seconds, regular sizes ..	43 10 0	,,
Oddments	37 10 0	,,
Kauri Pine—Planks per ft. cube	0 8 0 ..	—
Wainscot Oak Logs, per ft. cube	0 10 6 ..	0 12 6
Dry Wainscot Oak, per ft. super., as inch	0 1 0 ..	0 1 3
¾ in. do. no...	0 0 10 ..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch	0 1 0 ..	0 1 4
Selected, Figury, per ft. super., as inch	0 1 6 ..	0 2 6
Cuba Mahogany	0 1 6 ..	0 2 6
Dry Walnut, American, per super., as inch	0 1 0 ..	0 1 3 upwards.
French, "Italian," Walnut..	0 1 0 ..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0 ..	34 0 0
Do. do. (Java)	25 0 0 ..	27 0 0
American Whitewood planks, per ft. cube	0 6 6 ..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0 ..	21 0 0
Plain Compound Girders, ordinary Sections	22 0 0 ..	23 0 0
Plain Compound Stanchions..	23 0 0 ..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0 ..	21 10 0
Flitch Plates	20 10 0 ..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0 ..	14 0 0

Turning extra.

METALS (*Continued*).

IRON—	Per ton. in London. £ s. d.	£ s. d.
Common Bars	16 0 0 ..	—
Staffordshire Crown Bars, good merchant quality ..	16 0 0 ..	17 0 0
Staffordshire "Marked Bars"	17 10 0 ..	18 0 0
Mild Steel Bars	18 0 0 ..	18 10 0
Steel Bars, Ferro-Concrete quality, £18 basis price.		
Hoop Iron, basis price	19 10 0 ..	20 0 0
,, ,, Galvanised	30 0 0 ..	
(*And upwards, according to size and gauge.)		
Sheet Iron Black—		
Ordinary sizes to 20 g.	19 10 0 ..	20 0 0
,, ,, 24 g.	20 10 0 ..	21 0 0
,, ,, 26 g.	21 10 0 ..	22 0 0
Sheet Iron, Galvanised flat, ordinary quality—		
Ordinary sizes. 6 ft. by 2 ft. to 3 ft. to 20 g.	30 0 0 ..	—
Ordinary sizes to 22 g. and 24 g.	30 10 0 ..	—
Ordinary sizes to 26 g.	33 0 0 ..	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	31 0 0 ..	—
,, ,, 22 g. and 24 g.	31 10 0 ..	—
Ordinary sizes to 26 g.	34 10 0 ..	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0 ..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0 ..	—
Ordinary sizes, 26 g.	30 0 0 ..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20 10 0 ..	—
Best Soft Steel Sheets, 22 g. and 24 g.	20 15 0 ..	—
Best Soft Steel Sheets, 26 g. ..	22 10 0 ..	—
Cut Nails, 3 in. to 6 in.	21 10 0 ..	22 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.	
LEAD—Sheet, English, 4 lb. and up		41 10 0 ..	—
Pipe in coils		42 0 0 ..	—
Soil pipe		45 0 0 ..	—
Compo pipe		45 0 0 ..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—			
Strong Sheet	per lb.	0 1 5 ..	—
Thin ,,	,,	0 1 6 ..	—
Copper nails	,,	0 1 5 ..	—
Copper wire	,,	0 1 5 ..	—
BRASS—			
Strong Sheet	,,	0 1 3 ..	—
Thin ,,	,,	0 1 4 ..	—
TIN—English Ingots ..	,,	0 2 0 ..	—
SOLDER—Plumbers' ..	,,	0 0 11 ..	—
Tinmen's	,,	0 1 2 ..	—
Blowpipe	,,	0 1 4 ..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
,, fourths	4¾d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4¼d.
¼ Rough rolled and rough cast plate	4½d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white..	5d.
Ditto, tinted	6¼d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 5
,, ,, ,, in barrels	,,	0 3 6
,, ,, ,, in drums	,,	0 3 9
Boiled ,, ,, in barrels	,,	0 3 8
,, ,, ,, in drums	,,	0 4 0
Turpentine in barrels	,,	0 4 0
,, in drums	,,	0 4 3
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	54 0 0
Red Lead, Dry	per ton	56 0 0
Best Linseed Oil Putty	per cwt.	0 11 0
Stockholm Tar	per barrel	1 12 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots	per ton delivered	66 0 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

NEW COMPANIES.

THE undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C. :—

WILLIAM SALTHOUSE, LTD. (143,337). Registered March 20. To acquire, take over, and carry on business of lead, oil, glass, and colour merchant, plumber, painter, decorator, glazier, carried on as William Salthouse, at 21, Church-street, Preston, and elsewhere, sanitary, gas, hot water, and general engineers, builders, hardware and metal merchants, ironfounders, timber merchants, motor engineers, etc. Nominal capital, £5,000 in 5,000 £1 shares.

C. W. SHORTT & CO., LTD. (143,342). Registered March 21. To carry on business as agents for typefounders, manufacturers of and dealers in printing and other machinery, ironfounders, tool-makers, brass founders and metal workers, contractors, builders, painters, electrical and mechanical engineers, newspaper proprietors, etc. Nominal capital, £2,000 in 2,000 £1 shares.

HARLING & GLADWELL, LTD. (143,382). Registered March 24. To carry on business of builder and contractor and timber merchant, now carried on at Townhead Saw Mills, Rochdale, painters, decorators, gas, electric light, hot water and sanitary engineers, dealers in bricks, tiles, terra-cotta, pottery, earthenware, cement, lime, etc. Nominal capital, £5,000 in 5,000 £1 shares.

ARCHIBALD LEES, LTD. (143,403). Registered March 27. To acquire and take over business of A. W. Lees, at Standard Works, Halifax, and carry on business of mechanical, sanitary, electrical, gas, hydraulic and general engineers, bridge builders, machine and engineering tool makers, iron and brass founders, building and general contractors, painters, chemical manufacturers, metal workers, etc. Nominal capital, £3,000 in 3,000 £1 shares.

HENRY RIGHTON & CO., LTD. (143,411), 15, Coleman-street, E.C. Registered March 27. To carry on business of ironfounders, mechanical engineers, and manufacturers of all kinds, metal workers, boiler-makers, etc. Nominal capital, £1,000 in 1,000 £1 Ordinary shares.

ALFRED DANKS, LTD. (143,432). Registered March 29. To establish and carry on business of ironfounders, mechanical, electrical and general engineers, manufacturers of implements and machinery of every kind, tool-makers and metal workers, japanners, gas makers, carriers, merchants, builders and repairers of boats of every description. Nominal capital, £2,000 in 2,000 £1 shares.

E. M. LANDER, LTD. (143,438). Registered March 29. To acquire and take over business now carried on at 617-619, Harrow-road, Kensal Green, as E. M. Lander, and carry on business of monumental stone, marble and granite masons, quarry masters, stone masons, dealers in all builders' materials, builders' contractors, etc. Nominal capital, £2,000 in 2,000 £1 Ordinary shares.

WILLIAMS, ADDIS, & DOUGLAS, LTD. (143,492), 1, Central-buildings, Tothill-street, Westminster. Registered March 31. To carry on business of property owners, land, estate and house agents, auctioneers, builders, etc. Nominal capital, £500 in 1,000 10s. shares.

WALTER ROBB, LTD. (143,493). Registered March 31. To acquire, take over, and carry on business of electrical engineer carried on at Wakefield as Walter Robb, mechanical, sanitary and general engineers, coppersmiths, brass founders, metal workers, etc. Nominal capital, £10,000 in 10,000 £1 shares.

CHAMBERS & MARSH, LTD. (143,502). Registered April 3. To acquire, take over, and carry on business of timber merchants now carried on at Freith-street, Oldbury, as Chambers & Marsh, saw mill proprietors, timber growers, dealers in timber and wood of all kinds, and prepare same for market, builders' contractors, etc. Nominal capital, £10,000 in 10,000 £1 shares.

H. FAGAN, LTD. (143,525). Registered April 6. To carry on business of manufacturers of and dealers in furniture, etc., electric light, and sanitary engineers, builders, cabinet makers, etc. Nominal capital, £1,000 in 1,000 £1 shares.

H. G. COOPER, LTD. (143,526), 6, Fen-court, E.C. Registered April 6. To acquire and carry on business of electrical engineers and general office fitters, carried on at above address, furniture manufacturers, plumbers, hot water and gas fitters, decorators, builders, etc. Nominal capital, £2,000 in 2,000 £1 Ordinary shares.

TENDERS.

Communications for insertion under this should be addressed to "The Editor," and mu us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally*

BEDFORD.—For carrying out street i ments to the northern portion of Spens for the Town Council :—

Jacobs & Burton*	

LONDON.—For the construction of foun etc., for the third additional turbo-generat installed at the Greenwich generating stat the London County Council :—

C. Wall, Ltd.	£6,853
J. Ford	6,450
J. E. Whiter & Co.	5,449
J. Jarvis & Sons, Ltd.	5,290
G. Godstone & Sons	4,980
W. Manders & Co.	4,927
W. Downs, Ltd., Walworth*	4,751

[Architect's estimate, £4,500.]

MELTON MOWBRAY.—For asphaltin repairing the footpaths in the district, Rural District Council. Mr. E. C. Moo Surveyor, Wyndham-avenue, Melton Mowbr New work, 1s. 7d. per super. yard; topping, per super. yard; repairing tarring an ing, 2½d. per super. yard.—E. G. Cobley riche-street, Melton Mowbray.

WEYMOUTH.—For painting outside o combe Regis Boys' School, for the B Education Committee :—

T. Conway, Ltd.	2
Rendell & Sons	2
A. E. Whettam	2
Pates Bros.*	1

◆

PATENTS.

APPLICATIONS PUBLISHED.*

3,478 of 1915.—Jess Adolph J Arrangement for drying the masonry in ings and maintaining it dry.

3,626 of 1915.—Minor Everett Chamb Reinforced concrete or concrete-covered structures.

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"THE BUILDER" (Published Weekly) is supplied from the Office to residents in any part of the United at the prepaid rate of 19s. per annum, with delivery *Morning's Post* in London and its suburbs.

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* All these applications are in the st which opposition to the grant of Patent them can be made.

Asphalte.—The Seyssel and Metallic Asphalte Co. (Mr. H. Glenn), Office, 42, Po E.C.—The best and cheapest materials for courses, railway arches, warehouse floor roofs, stables, cow-sheds and milk-rooms, aries, tun-rooms, and terraces. Asphalte tractors to Forth Bridge Co. T.N. 2644 Ce

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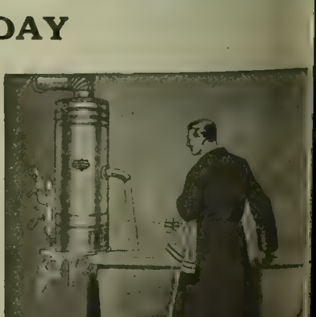

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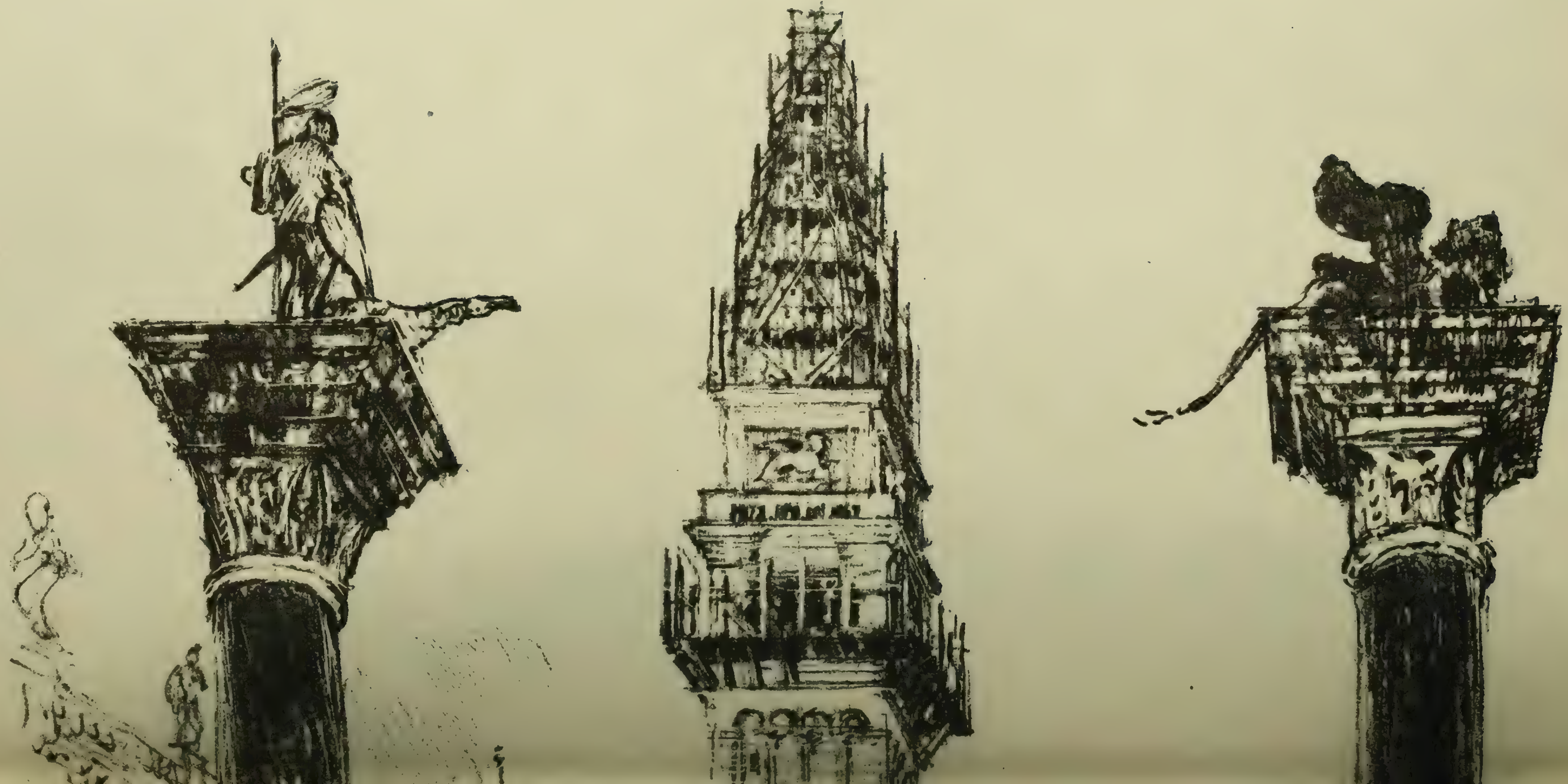
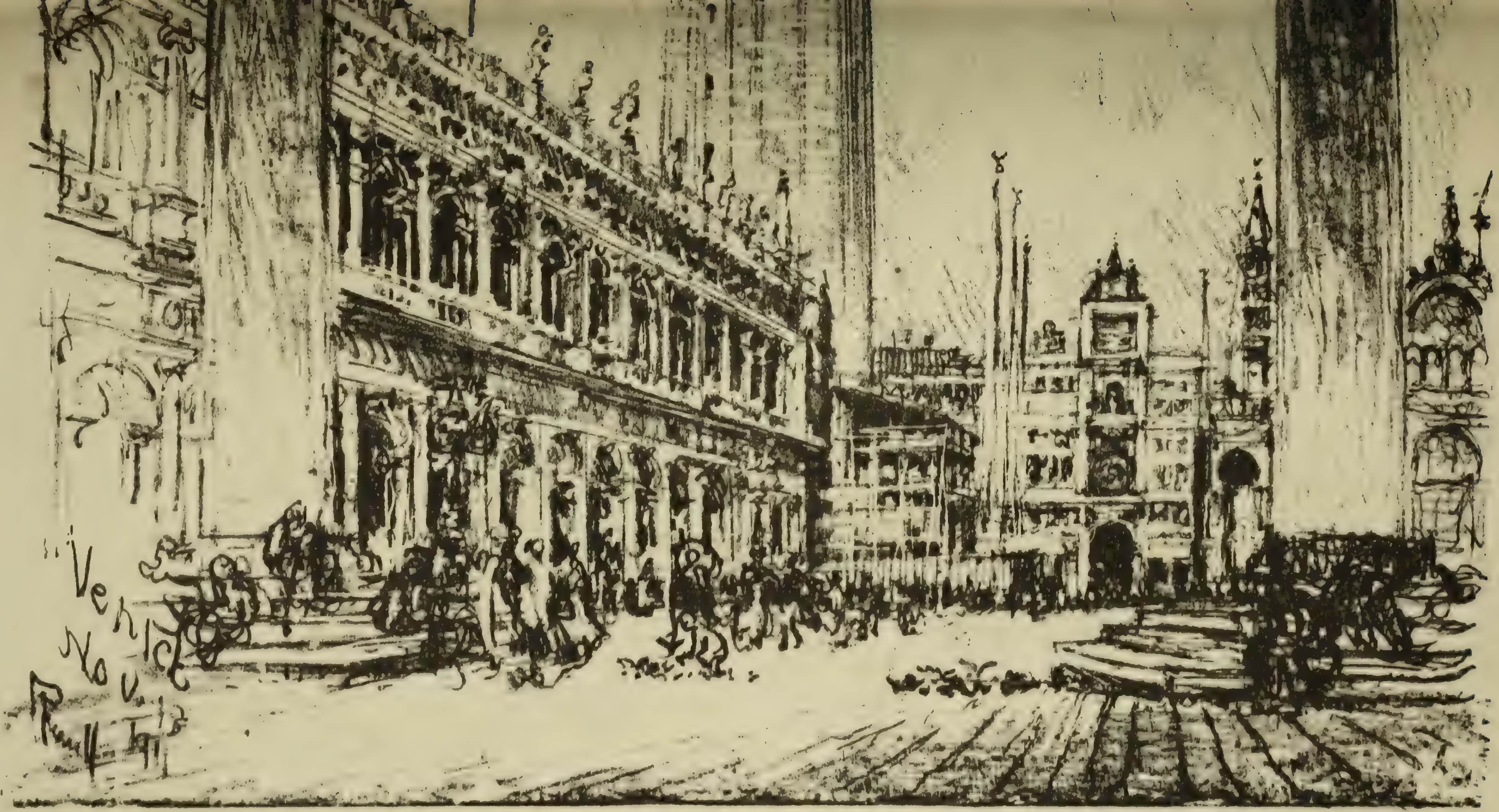
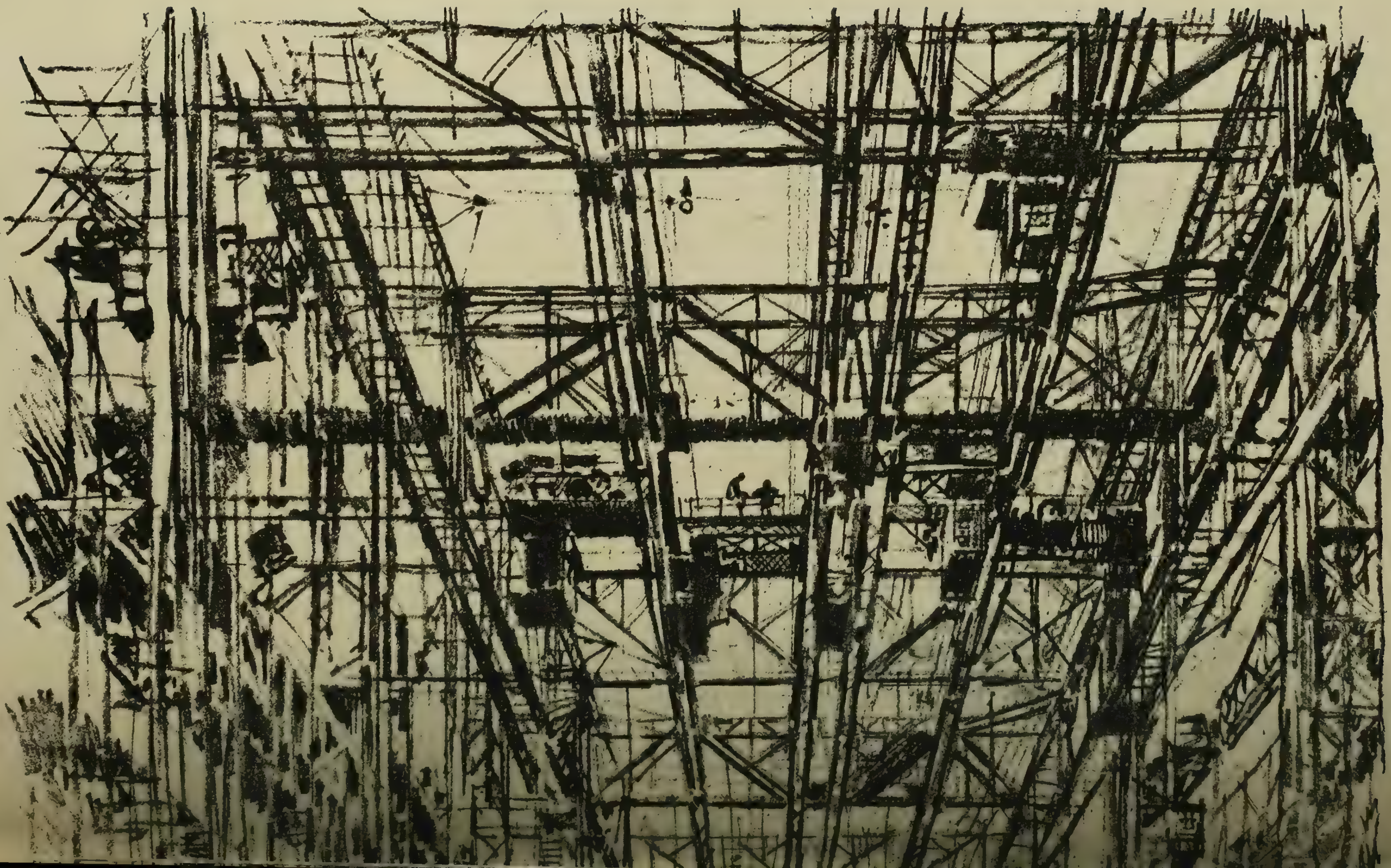
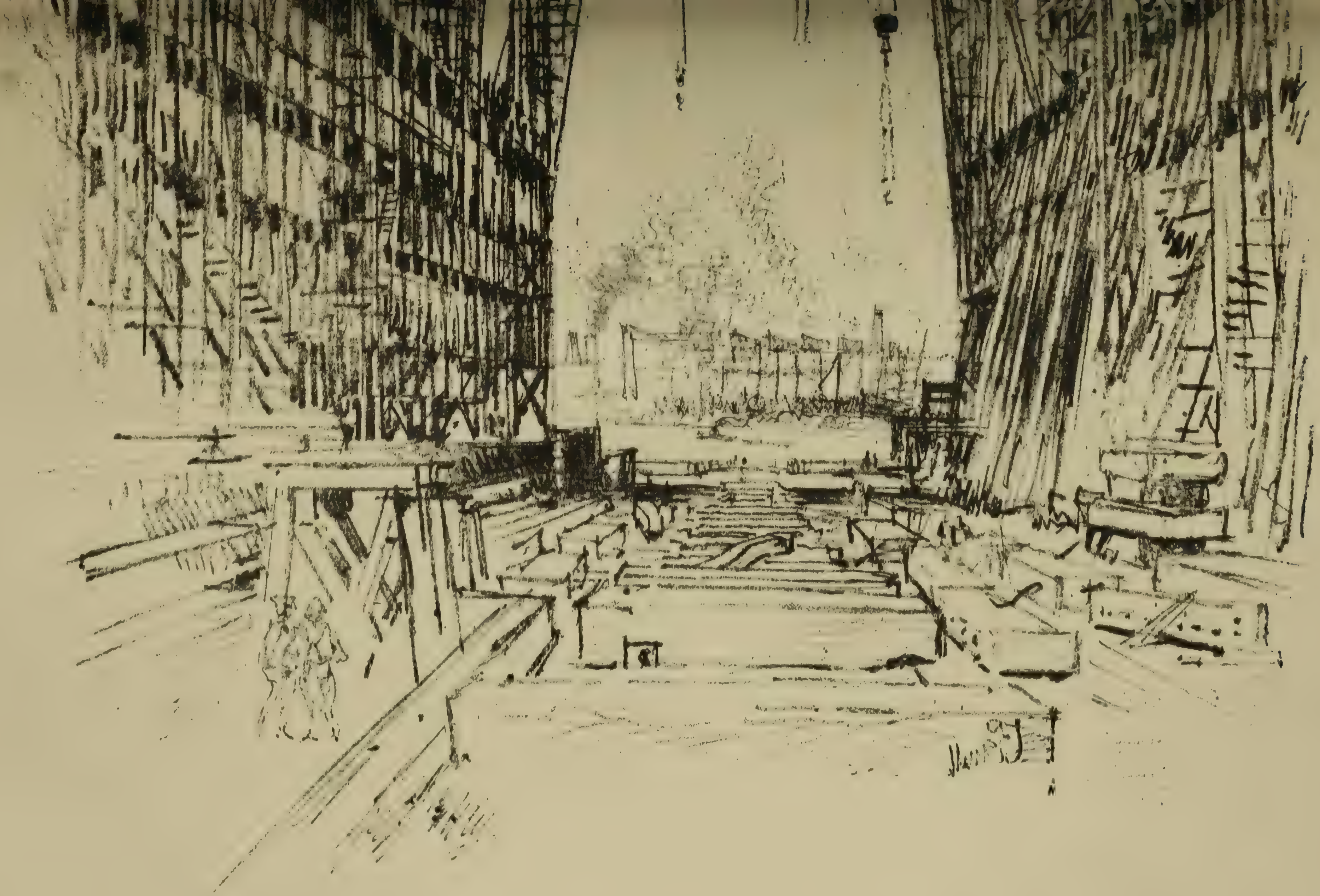




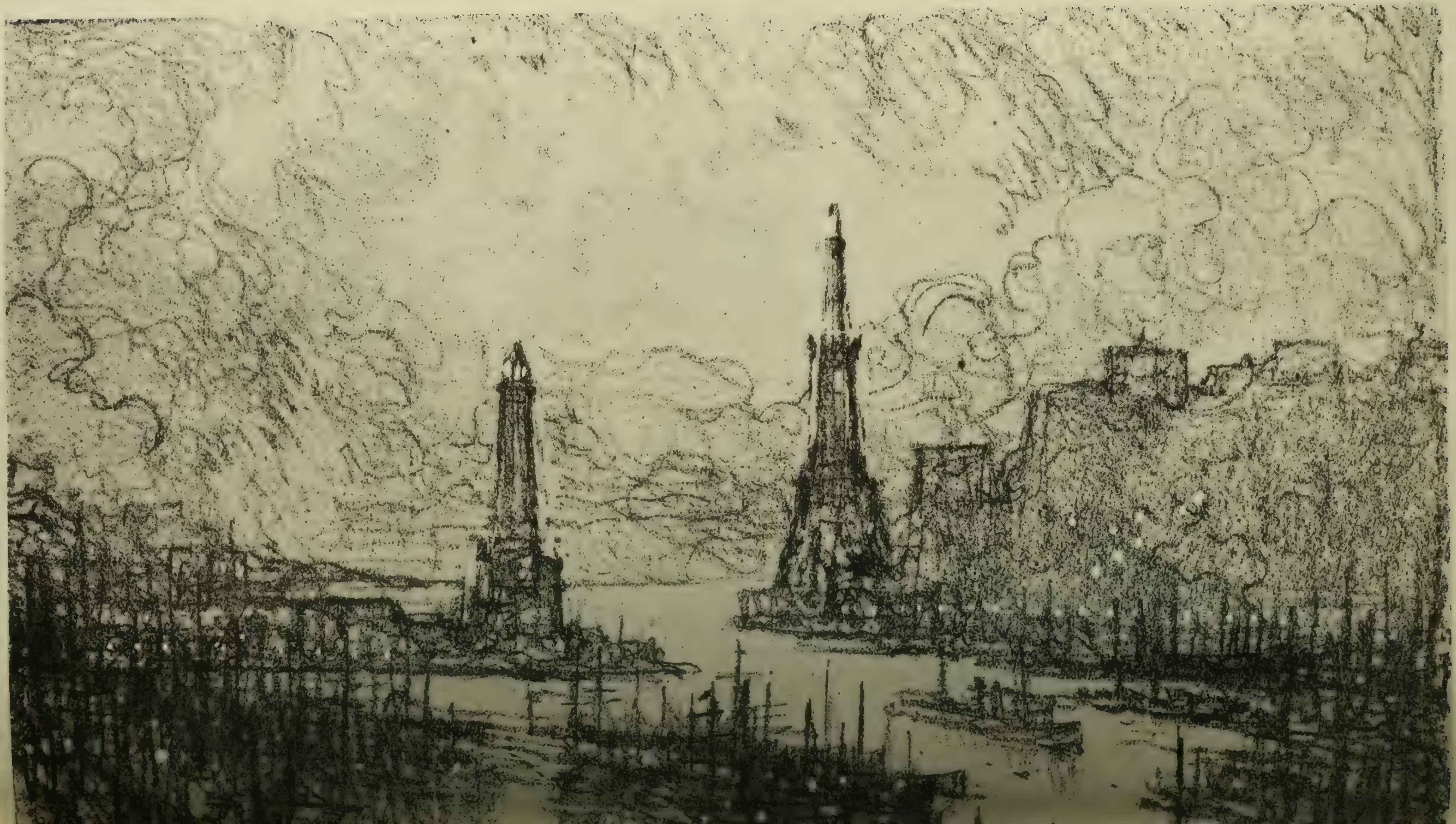
VENICE. FROM A LITHOGRAPH BY JOSEPH PENNELL.

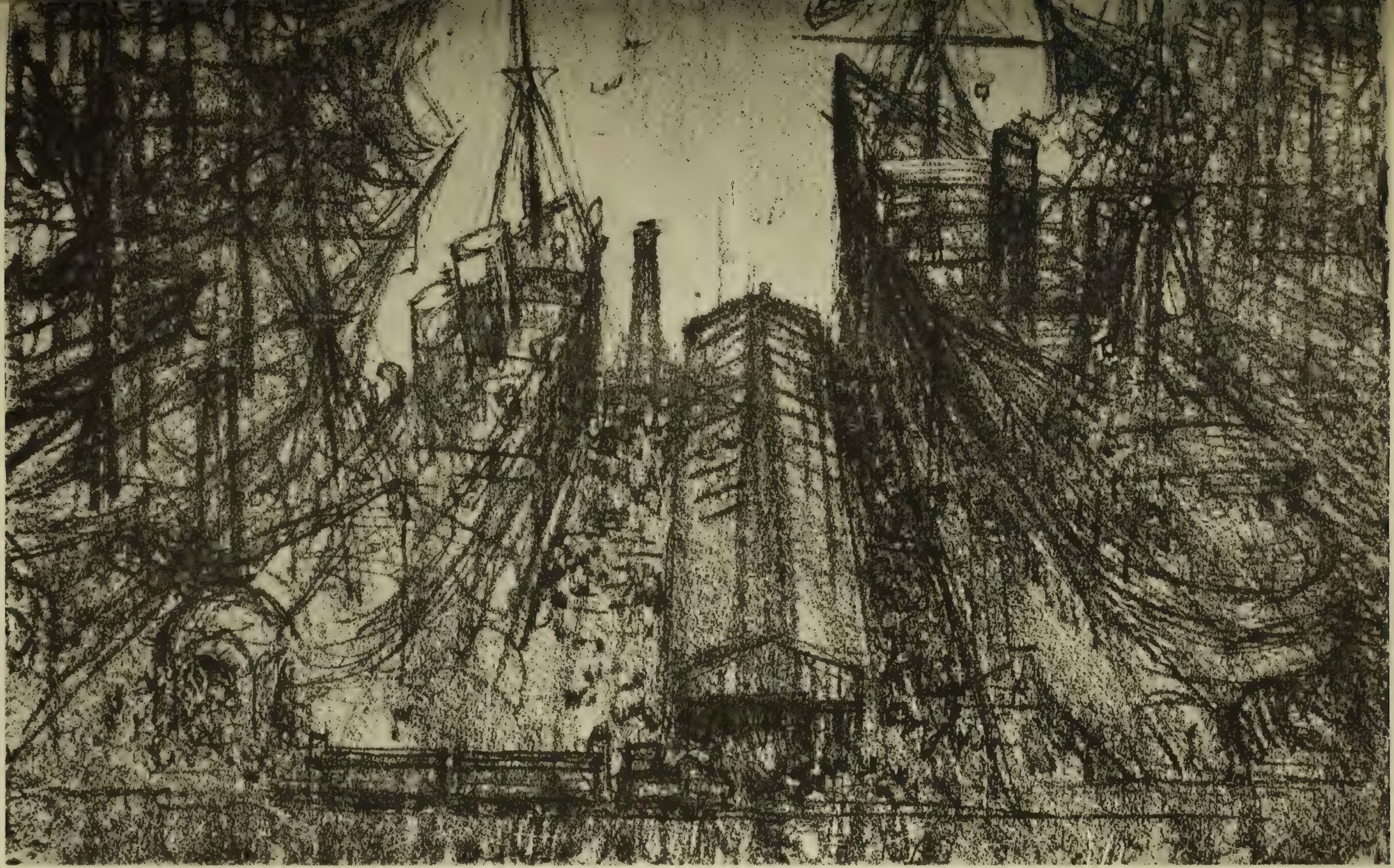




THE VULCAN SHIP-BUILDING YARD, HAMBURG.—FROM A LITHOGRAPH BY JOSEPH PENNELL.

NEW YORK.—From a Lithograph by Joseph Pennell.





THE HARBOUR, GENOA.—From a Lithograph by Joseph Pennell.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

OL. CX.—No. 3821. APRIL 28, 1916.

THE SHAKESPEARE TERCENTENARY.

WHEN the tercentenary of Shakespeare's birth was celebrated in 1864 the world was enjoying a momentary peace. Lectures, memorials, the performance of many plays then, as now, were obvious means of celebrating the day, the only jarring note struck in England, probably in the d. was that amazing speech in Exeter Hall recorded in lassic pages of "Father and Son," in which the poet was ibed to the passionate indignation of both as a lost soul burning in hell fire. The jarring note this year comes from an individual, but from a nation. More than ever Germans are insisting on Shakespeare as a discovery, st as a writer, of their own, claiming their cause as his were still alive, claiming his cause as theirs since he t. We cannot resent this, for resentment implies a certain ee of justice in the claim or it will lose its sting; we cannot se it, for it is too ridiculous for scorn. We can only laugh, aughter is fatal to German pretensions and infallibility, perhaps console ourselves with the reflection that there never been a moment in English literary history in which espeare has not been *laudatus a laudato*, honoured by the est of his countrymen, hardly a moment in which, some- e in his England, his plays were not being applauded by east, save during the gloomy period of Puritan domination ving on the execution of that King against whom a ness for the "lewd profanities" of Shakespeare was brought serious charge.

e all know that a change of taste came in with the oration, yet Davenant, who reopened the English theatre, fond of boasting his descent from Shakespeare, and a e at Pepys' Diary will show how well his plays kept their upon the stage. Betterton, the most famous of Restoration s, won his greatest laurels in "Hamlet." Dryden, play- it as well as poet, does homage to Shakespeare in prose rpassed to this day in eloquence as well as justice, and in enerous old age hails the youthful genius of Congreve with ry that

> Heav'n, that once was prodigal before,
> To Shakespeare gave as much, she could not give thee more."

edited him, and so, in a better text, did his rival, Theobald; son did him honour in prose; Thomson in verse; Fielding ually quoted him; Garrick, although too often using s "amended" version, set England ringing with his est lines, and was painted in some Shakespearean character nost of the artists of the day; Johnson brought out his delayed edition, the preface to which is the finest thing ver wrote. Boswell made himself ridiculous at Stratford ne Shakespeare jubilee of 1764, when fragments of the d mulberry-tree were treasured as things of price and sold then imposing sums; monuments rose in Westminster y and at Stratford; tokens were struck bearing the poet's . And all this, and more, in the "Philistine" eighteenth ury, from whose obscuring clouds Coleridge, in all the self- iency of the Romantic revival, set out to rescue Shakespeare y forty years after the publication of the Variorum edition set the seal of supreme scholarship as well as popular oval on his work.

he late Sir James Murray once said at a public meeting he believed that the Shakespearean revival, the free use hakespearean quotation, was due to Sir Walter Scott. at least of his audience longed to rise, not to deprecate great man as a true Shakespearean. "When I want to ess a sentiment which I feel strongly, I find the phrase in espeare," says his "Journal"—but to quote the supremely ant passage in "Mansfield Park," published several years re "Waverley," in which Henry Crawford is made to say, lo not think I have had a volume of Shakspere in my hand since I was fifteen. But Shakspere one gets acquainted with without knowing how. It is part of an Englishman's constitution. His thoughts and beauties are so spread abroad that one touches them everywhere; one is intimate with him by instinct." No, Shakespeare has never been obscured in England, much less deliberately disregarded. The nation has "to be or not to be'd" every evening of our Christmas holidays, to quote another phrase of Miss Austen's, until "Hamlet" has become part of our common speech and its very ghost a proverb. Take another test, the songs, and see how every generation has set Shakespeare's words to airs that have become the common heritage of Englishmen. Purcell, Stevens, Arne, Bishop, all have set his songs as songs were set before the age of drawing-room music, so that the words and air are one in the memory of all, and later versions only serve to show their own emptiness.

Leigh Hunt threw out a pleasant hint for the private celebration of Shakespeare's birthday, that families and friends should meet to read together one of the greater plays and to sing Shakespearean songs in rooms adorned with the flowers which Shakespeare loved. This is well, and might, as Hunt says, happen appropriately every year. What of this greater anniversary, this tercentenary? The programme proposed—lectures, plays, and the like—is well, but what of a greater and more permanent memorial? The subject of war memorials has already been raised with salutary cautions in these columns; we can but repeat the hope that the memory of Shakespeare, like that of the honoured dead of to-day, may not be insulted with vain and pretentious erections which bear witness to nothing but the incurable want of a monumental sense in modern England. The text of Shakespeare is as perfect as modern scholarship can make it; the setting of his plays wants no accessory which theatrical skill can devise. We have a Shakespeare Theatre at Stratford-on-Avon; we have whole companies devoted to the performance of his plays; we have the promise, if not yet actually the fulfilment, of a National Shakespeare Theatre, on a site admirably adapted for the purpose near the British Museum and University College. This theatre, the absence of which constituted the greatest blot on the literary side of our national escutcheon, is one of the many reforms postponed owing to the war, and, though we may well regret that the official celebration of the tercentenary cannot take place, as might have been hoped, within its walls, yet here as elsewhere the project is postponed to the convenience of public service in other fields. When the first performance shall be held in the completed theatre it will be felt to be in fact, as it will be in spirit, a public commemoration of the tercentenary.

The theatre being secured, can we not devise another means of commemorating the great name? Now that threats of invasion by sea and actual invasion by air have brought home to all the value of the land of England as our country, have roused the love of England as our goodly heritage, can we not ensure the preservation of some tract of English country threatened by a more insidious invasion, and hand down to posterity some unspoilt corner of Shakespeare's England, secure against the desecration or, as he says, the infection of the jerry-builder? Here surely the truest memorial of the tercentenary; the machinery is there in the shape of the National Trust, the country to be saved is omnipresent, the need for saving it is urgent. Let us join hands in this, remembering that small sums have their use as well as great, and our reward shall be the blessings of posterity and the sense that we have done our share in protecting and preserving in his name the land that Shakespeare loved:—

> This royal throne of kings, this sceptred isle,
> This castle of majesty, this seat of Mars,
> This other Eden, demi-Paradise;
> This fortress built by Nature for herself
> Against infection and the hand of war.

NOTES.

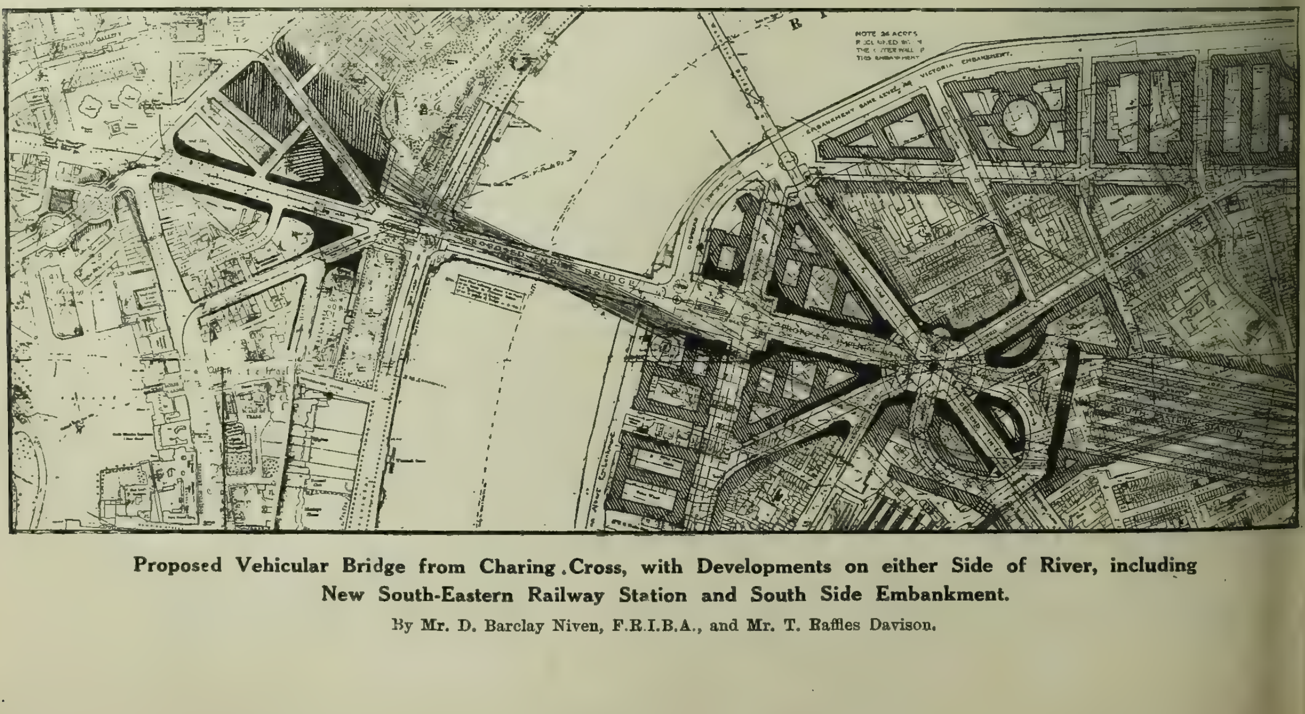
Charing Cross Bridge. We give an illustration of the well-thought-out proposal of Mr. Barclay Niven and Mr. Raffles Davison for the removal of Charing Cross Station to the southern side of the river and the resulting improvements which would be made possible thereby. We do not minimise the difficulties which lie in the way of the realisation of this great project, but we are entirely in sympathy with the endeavour of the London Society to procure the abandonment of the South-Eastern Railway Company's Bill for the strengthening of the existing monstrosity which spans the river and desecrates its beauty. Charing Cross Station is inconveniently placed and is an architectural eyesore, while it occupies an immensely valuable area. It is too early to discuss memorials which may be erected after the war, but the most fitting of all memorials, and the one most feasible in this country, is the accomplishment of a great work of public utility in a worthy manner, and such a new bridge, if architecturally treated, would be a most fitting memorial of the present titanic struggle, while it would be happily associated in position with Waterloo Bridge, which recalls to our minds the manner in which Europe was saved from the dangers which threatened it during the "Hundred Days."

Industrial Fatigue. The recent Memorandum issued by the Health of Munition Workers' Committee on Industrial Fatigue deserves consideration. Industrial fatigue may not be consciously felt by the worker, and yet may show itself in his work, and the Committee therefore consider the best tests that can be applied for discovering this latent fatigue. The output obtained is suggested as the best test if it is scientifically observed, both over short and long periods, and corrected for any variable factors. The effects of fatigue which has resulted in "over-strain" are of a more permanent nature, and affect capacity for periods far beyond the normal periods of rest, and the Committee therefore draw attention to the uneconomical policy of ignoring the requisite periods of rest, and observe that if the need for weekly rest had been observed earlier in the war a large part of the diminished capacity now being experienced would have been avoided. The Memorandum is a tribute to the patriotism of the munition workers, as their lessened capacity in many cases has been due to their strenuous efforts to maintain output despite their weakened physical condition. In a long war like the present this is a most important question, and the Committee dwell on the importance of maintaining efficiency by proper periods of rest; in fact, the report amounts to this, that a stitch in time saves nine, and that we in this country are behind some other countries in the application of physiological science to industrial conditions.

Liverpool Cathedral. The *Times*, in an admirably-written article entitled "The Mason's Way," describes the building of Liverpool Cathedral and the manner in which it recalls the procedure of the past, for the mason's way is what it was in the centuries which lie behind us and probably in the centuries which lie before us too. Modern invention has not created any method of replacing the mason's manual work, and processes by which stone is prepared and dressed are what t were when the great cathedrals of the past were slowly crea The building of Liverpool Cathedral would have been a work centuries; now it will probably be completed within a spa thirty years. Like the old cathedrals, the starting-point has made with the choir, but unlike most of them the nave will be car out on the lines originally contemplated. The critic of the *Ti* considers that the east end of the Cathedral shows an advanc quality of design compared with the Lady Chapel, which is w we should expect, since the greater power of design possessed by architect the more capable he is of learning by experience. We h that the people of Liverpool will consider the adequate comple of their great building the most fitting memorial they can erec commemorate those of their citizens who have fallen on the fiel battle.

Breadsall Church, Derbyshire. All Saints' Parish Church, Breadsall, in the of the Derwent and three miles distant from De was destroyed by fire by Suffragettes in June, 19 the tower and some portions of the outer walls were saved. The fabric has just been reinst at an outlay of nearly £9,000. The fine church, of which we publis a drawing by Mr. J. Tarney in our number of September 22, 1 has a chancel, nave, north aisle, and a tower with a lofty poi spire, octagonal at the base; the south doorway in the nave is Norman, and the nave arcade of three bays, together with the res the structure, is Transitional or Early English; in the south of the nave are square-headed Decorated windows; the east wind having five lights, is of the Perpendicular period. There were s ancient bench-ends of oak, sedilia of three bays, and in the cha a monument (1802) to Erasmus Darwin, the physiologist and p who lived in the Priory, which was built in the sixteenth cent upon the site of the Holy Trinity Priory, founded *temp.* Henry and was given by Edward VI. to Henry, Duke of Suffolk, in 1552.

The Civic Arts Association. The Civic Arts Association, whose foundation were glad to record, draw attention to a lis prizes amounting to £205 which they are offe as premiums for the best designs submitted eight classes of monuments, the prizes varying in amount from to £2. As they state, there is a great need for a class of memo which will be within the reach of those who have small inco and the Association hopes to put before the public designs suggestions such as frames for Rolls of Honour and photogra caskets for mementoes, and stands for holding medals. The ditions governing the competition will be sent to intending petitors who write to the Secretary at 28, Princes Gate, S.W., sen a postal order for 1s. and a stamped addressed envelope. The po orders will be returned on receipt of a *bonâ fide* design. The Arts Association are also prepared to offer the guidance of an ex advisory committee to public bodies or private individuals requi such assistance. We hope that the Association will have ev success in carrying out its programme, with the objects of which are in complete sympathy.



Proposed Vehicular Bridge from Charing Cross, with Developments on either Side of River, including New South-Eastern Railway Station and South Side Embankment.

By Mr. D. Barclay Niven, F.R.I.B.A., and Mr. T. Raffles Davison.

LONDON CHURCHES WREN AND LATER CHITECTS OF THE NAISSANCE.

XIX.—St. Stephen, Coleman-Street.

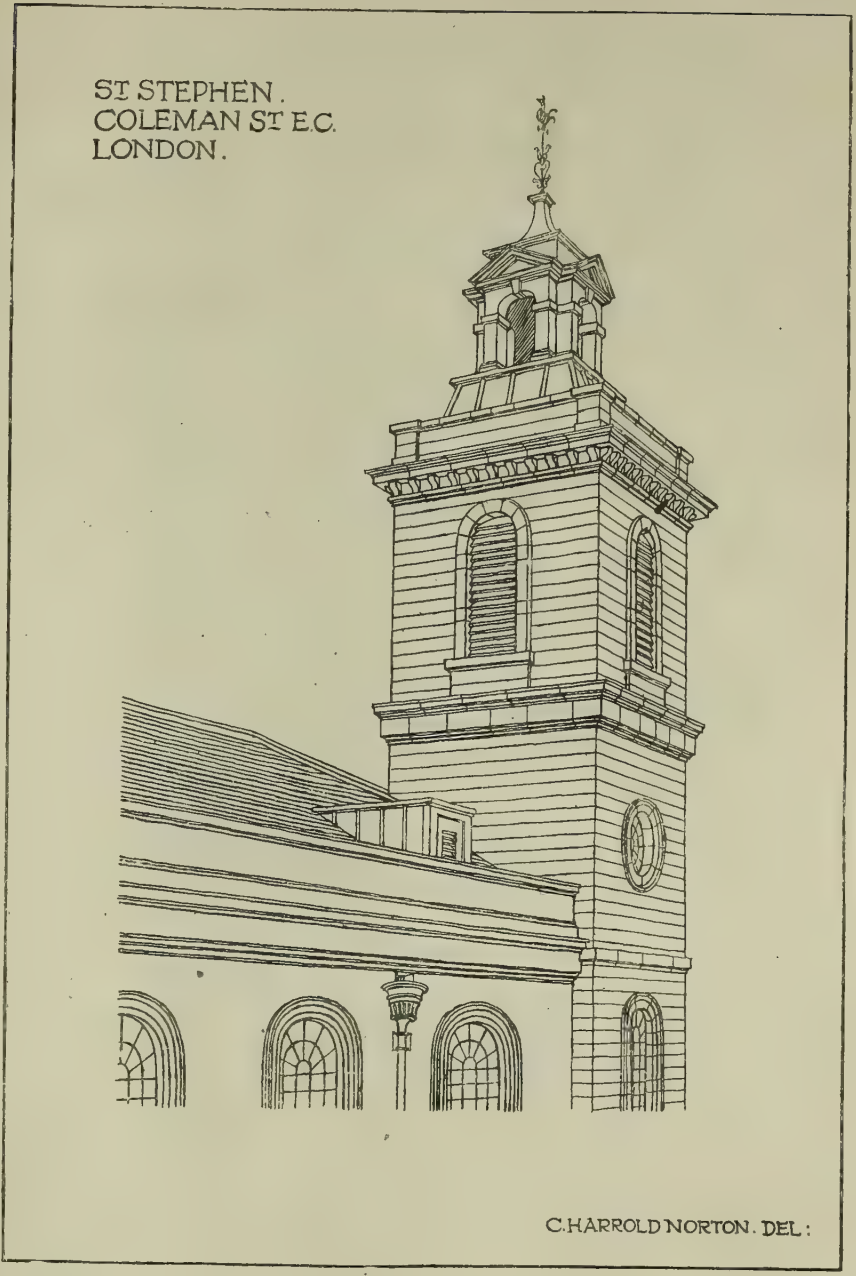
hurch of St. Stephen, Coleman-street,
an earlier structure which perished
ire, and was used for long periods as a
o St. Olave, Jewry. The patronage of
g has since the time of Queen Elizabeth
the hands of the parishioners. The
church is markedly irregular in its
l an example of Wren's disregard
netrical planning; the tapering form
less apparent in reality than it is on
contains some fine woodwork in
-piece and the doorcase on the north
ne chancel; but the lower part of the
nd the gallery with screen under are
poor in design. The east window
s filled in with a sacred picture which
described as being a transparency
han a window, and has a decided
n of the Baroque, which is also
in the very interesting gateway
o the courtyard at the side of the church.
rving over it, which is in high relief,
s the Day of Judgment, and the
on of the gateway forms a most
ue incident in a London street, supply-
interest and vigour which is found
and which the Baroque suggests
an any style before or after it. St.
Coleman-street, is one of the more
g among the smaller and simpler
churches.

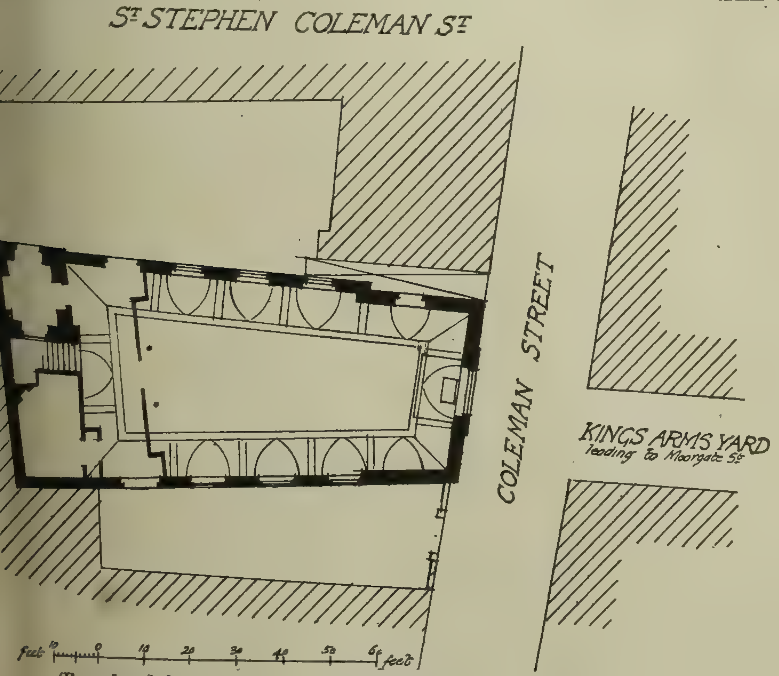
XX.—St. Andrew-by-the-Wardrobe.

urch of St. Andrew-by-the-Wardrobe
s name from its proximity to the
eat Wardrobe, a house built by Sir John
np, Constable of Dover and Warden of
e Ports, which was purchased, after
, by King Edward III. and used as
or the Keepers of the King's Apparel.
ory is in the gift of the Mercers'
and with the parish is united that of
Blackfriars.

urch, which cost £7,000 to build, was
in 1692. The exterior is not remark-
itecturally, though a simple and
te expression of the galleried interior.
it is among the most pleasing of
urches, though exceedingly simple in
The segmental ceiling rests on
ave piers, which are panelled from
y level downwards. The intersecting
oins which form the ceiling over the
very pleasing in effect, the curves of
y are composed cutting slightly into the main segmental ceiling over the nave. The organ-case and woodwork generally are well designed and in a good state of preservation. Among Wren's churches this is one which has been least spoiled by additions or alterations and therefore better conveys the designer's intention than many other of his churches do.

There are a few monuments, characteristic of the manner of the later part of the eighteenth century and early nineteenth century, at the ends of the side aisles, erected in honour of three successive rectors—the Rev. William Romaine, who died in 1795; the Rev. William Goode, who died in 1816; and the Rev. Isaac Saunders, who died in 1836.


ST STEPHEN.
COLEMAN ST E.C.
LONDON.
C.HARROLD NORTON. DEL:



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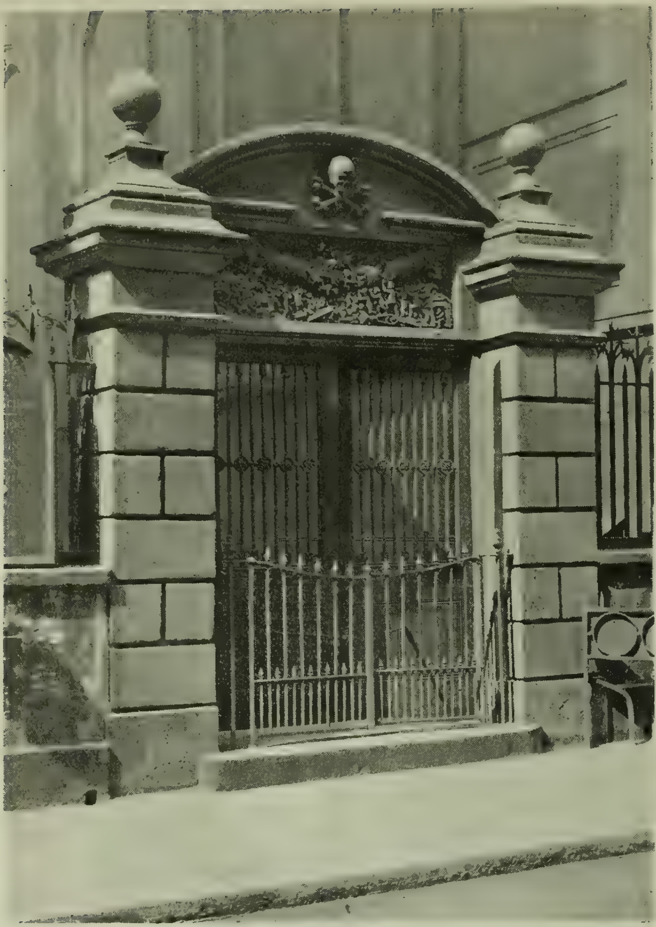
◆

HISTORIC CATHEDRAL DESTROYED.

It is stated that a violent fire broke out at Andria, near Bari, and almost completely destroyed the Cathedral there. The fire spread as far as the Bishop's Palace. The dwellings near by are in danger.

THE ROYAL ACADEMY SUMMER EXHIBITION.

As the Galleries are not required for the annual dinner, which will not take place this year, the President and Council have decided to make the cards of invitation to the private view available for either Friday, April 28, or Saturday, April 29, from 10 a.m. to 7 p.m. The public will also be admitted to the exhibition on Saturday, April 29, on paying an entrance fee of 5s.



Wren's Churches: St. Stephen, Coleman-Street, London, E.C. (*See page* 311.)

THE DEVELOPMENT OF LONDON.

SIR ASTON WEBB presided on April 18, at the hall of the Royal Society of Arts, over the second ordinary general meeting of the London Society, when Mr. W. R. Davidge, F.S.I., gave a lecture on "The Development of London."

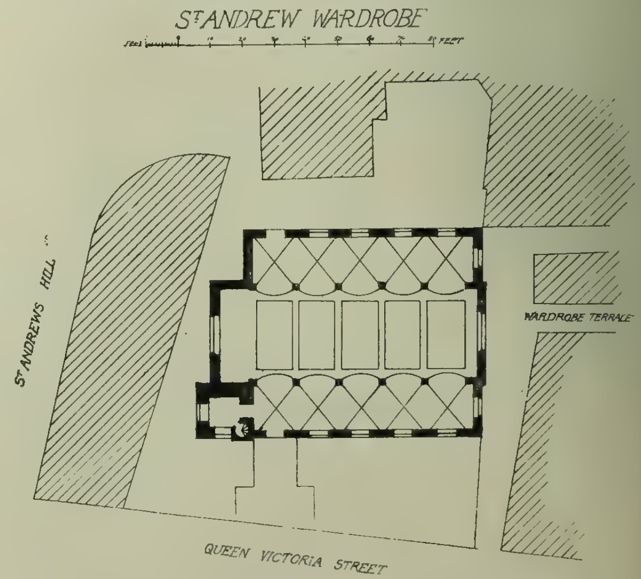
The lecture was profusely illustrated with lantern slides of old maps and views of interesting streets and buildings, and Mr. Davidge made a running commentary on the views as they were shown. He remarked that London, like a great many other cities, was only just beginning to be discovered. The facts were very much scattered, and wanted a great deal of collating before one could come to any justifiable conclusion as to the original London. The first slides shown illustrated the Roman roads. These were Watling-street, coming from Dover to what is now Hyde Park Corner, and which proceeded by what is now called the Edgware-road to Manchester. Westwards was the road coming from Silchester, which also ran to Hyde Park Corner, and then went by a more or less straight line through Ludgate to the City, and thence through Romford to Colchester. Mr. Hilaire Belloc had recently traced out another road—Stane-street, which came from Chichester to London, and then ran northwards to Cambridge. The generally accepted view was that there was at first something in the nature of a citadel immediately east of Walbrook, where Cannon-street Station now stood, but the opposing view was that the citadel was west of Walbrook. The lecturer exhibited a plan of what he considered was the probable planning of the Roman London, and pointed out that the site of the Mansion House had always been the centre of the City, which stretched from the river to the Roman wall. There was a basilica at Leadenhall, and Wren, when he rebuilt Bow Church, discovered the remains of a Roman temple. The distance between this temple and the centre of the City exactly corresponded with the distance between the basilica and the centre, and they were practically in a straight line. Mr. Davidge also pointed out the sites of other buildings and streets in support of his conception of the planning. He proceeded to show the audience the gradual growth of London and the types of buildings of the different periods, and amongst other things mentioned that Cheapside was in the Middle Ages used as a tilting-ground and that old St. Paul's was a much larger building than the present. He referred to the plans of Evelyn and Sir Christopher Wren for the planning of London after the Great Fire, and said that Wren's idea of a broad new quay along the bank of the Thames was actually carried out. By the exhibition of maps of various periods the audience was enabled to see how the was gradually encroached upon by buil until in 1812 it was necessary to pass a of Parliament to whitewash the people had stolen this piece of public walk. In John Gwynn produced a plan for the London that was to be, and it was a c thing that there was hardly any scheme carried out but what was shown on that The Holborn to Strand improvement there, and also the site for Trafalgar-s although Gwynn placed it in rather a position. He further suggested Wa Bridge and the Thames Embank Reference was made to the fact that a hu years ago new main wide roads were pla as, for instance, the Euston-road, an lecturer urged that it was even of g importance that new roads should be pl and carried out now to meet presen future needs.

Mr. Crow, in proposing a vote of than Mr. Davidge, said he was glad he held opinion about Roman London in spite authorities who traversed his views. could hardly resist the conclusion tha Romans developed London somewhat i way suggested by the lecturer. As t suggestion recently made that the Roma stood on the other side of the river, th considered, was an absolute myth. He that the roads suggested by the Traffic were absolutely essential to London.

Mr. Barry Parker seconded the motio

Mr. E. G. Culpin considered if such le could be brought before the younger gene and they could learn more of the facts would have far more respect for Londo city, and there would be a great revival o patriotism and more determination to se improvements were carried out.

Mr. H. J. Leaning said that Londo tained an enormous number of ob arrangements, and they had to realise th time had arrived when many of these would have to be scrapped. Up to the p about the only thing scrapped were the trams. Amongst other things which have to go were some of the overhead via of suburban railways. They prevented communication, and it was perfectly imp to get a decent lay-out with these ugly via bisecting these districts. Since the G ment had taken over the railways the seen many of the stations closed on the side of the river, and this showed there be no inconvenience if they were rem Although town-planning was much in th they had no real scheme for the heart of Lo In some districts they had huge popul without open spaces, and he suggested some of the hospitals and other instit might be decentralised, and the sites the occupied utilised for open spaces. A object of open spaces was, to a great e

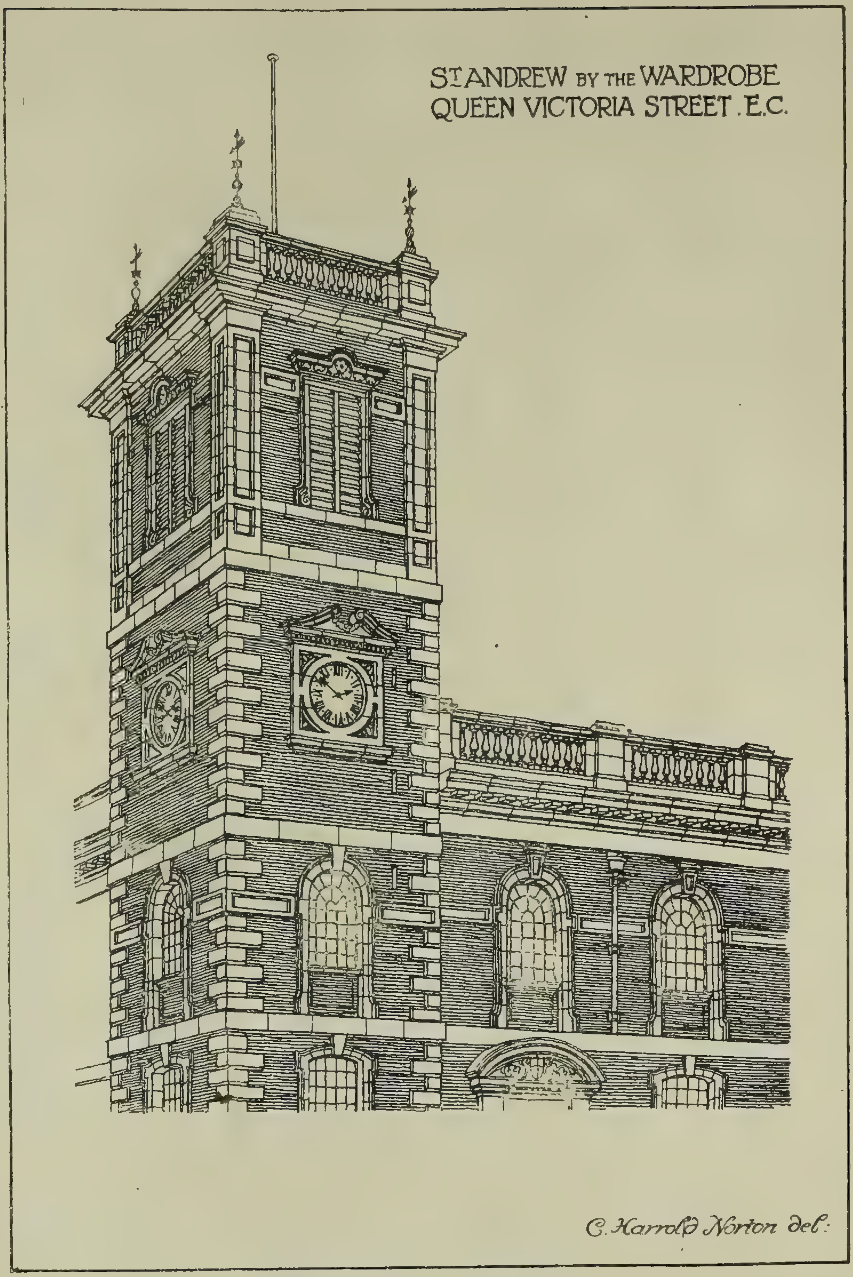


(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.) (*See page* 311.)

ovide recreation for the young, he
ted that local authorities might be
ered to erect halls and gymnasia.

Aston Webb said that before they looked
d too much it was well to look back and
w London had gradually grown. On the
hand, they had been looking back for so
years that he felt it was quite time they
to make use of their explorations into
st, and with more energy and determina-
e what could be done for London in the
It was, of course, an enormous subject,
they had all felt depressed by. They
feel what little effect they could have on
city, but still there was some hope.
avidge had referred to Gwynn. He (the
r) was proud to have an original copy
ynn's book, in which apparently on his
uthority he laid down certain lines of
ements in London, and, although he did
e to see their realisation, many of those
als had been carried out. It was quite
able, therefore, to expect a Society like
even in time of war, to be thinking
nally of the future of London, and for
o feel in doing so they were not entirely
ng away their time. Nothing could be
han for a body of citizens to join together
nsider how they could improve this great
and when they remembered that it was
sing at an alarming rate every year, and
creasing without any plan and without
e having the power to say that this or that
be done, it was impossible to exaggerate
nportance of the matter. It had been
hat London was ruled by about eighty
ities, and there was no supreme authority,
e thought they would agree that before
ng could be done there must be one
e authority for the whole of London.
ought the Borough Councils at present
very well after the details, but for the
objects there must be one supreme
ity to decide. The arterial roads
ed by the Board of Trade had been
ed of by all the local authorities, but
was no one at present who had the power
y that the land necessary should be
ed and left for the purpose of the roads.
n was being encircled with a series of
lanning schemes, quite regardless of
heme of roads, so they were trying to
e Government to empower some authority
they did not care what authority it
to settle once and for all the lines of these
arterial roads. Exactly the same thing
with regard to open spaces.

ote of thanks to the Chairman, proposed
. Lovegrove, concluded the proceedings.


ST ANDREW BY THE WARDROBE
QUEEN VICTORIA STREET . E.C.
C. Harrold Norton del.

Wren's Churches. (*See page* 311.)

THE
RVEYORS' INSTITUTION:
TOWN PLANNING.

ur issues of April 14 and 21 we published
rger part of Mr. W. R. Davidge's paper
d "The Principles and Position of Town
ing," which he read at the Surveyors'
ution on the 10th inst. We now give the
sion of the lecture :—

The Slum Problem.

he encouragement of the community sense
een much more in vogue in the United
than in this country. In the great cities
States an energetic campaign is carried
r the encouragement of the civic spirit,
roper pride in one's town; and in many
such as Chicago, this feeling finds its
in the endeavour to secure not only a
civic centre for the city as a whole, but
hbouring centres." Great Britain has
and prospered under the system of
iastical parishes, and it is difficult for
nglishman to realise the difficulties which
countries labour under where they have
had the advantage of organisation in
es and parish centres.

deal with the slum problem and the abolition
ms, very intimate and constant study of the
m is necessitated. In Chicago, for instance,
the study of slums has been reduced to
nce, observations over a large number of
blocks show a constant fluctuation in the
cter of the inmates. Galicians give place
ussians, and Russians to Italians. Whole
districts change from poverty to comfort, or from well-to-do districts to squalid tenements, but all these changes can be traced by careful study to a direct relation between cause and effect.

American Ideals.

American city planning may be divided into four phases :—

(1) Rapid transit (already touched upon), which may be described as the engineer's ideal.
(2) The civic centre, which may be described as the architect's ideal.
(3) The provision of diagonal avenues and parkways.
(4) The provision and linking up of parks, and the scientific distribution of children's playgrounds.

The Civic Centre.

The value of magnificent monumental buildings, in encouraging a sense of civic pride, is everywhere appreciated, and this, no doubt, is the reason for the American thirst for civic centres. The idea of an architectural conception or ideal, however, is unfortunately in most cases limited to monumental enterprises of this type which are little likely to be carried into effect, and the cost of which would be almost prohibitive. It is strange that such an eminently practical people as the American should devote so large a portion of their "city planning" programme to the provision of these costly civic centres, while allowing miles on miles of rectangular blocks and hundreds of five-story tenements to be built in all directions without a murmur. *Business centres and subsidiary centres will nevertheless form themselves in every town.*

Diagonal Avenues and Parkways.

It is a remarkable commentary on the rectangular block system of development everywhere to be found in the United States that, almost without exception, planning commissions are reporting in favour of the construction of new diagonal avenues across the rectangular system to provide access in a radial direction to and from the centre or business portions of the various cities.

The rectangular system of lay-out has generally proved quite satisfactory so long as the town remains of limited size, but once the town develops beyond the original square mile or so some form of diagonal communication becomes a necessity, and the improvement plans that are being prepared by practically all American cities are realising this essential point. Philadelphia has already spent some millions on the "Fairmount Parkway," which is nothing more or less than a diagonal of this description. Mr. Burnham's well-known plans for Chicago provided for several diagonal avenues of this description radiating from the proposed civic centre and city hall. The improvement plans of Brooklyn and scores of other cities in the States, and even so far afield as Santiago in Chili, all show the now generally appreciated *need for diagonal routes.*

The Linking-up of Parks.

The linking-up of parks by a system of parkways or tree-lined avenues is also a well-recognised part of American city planning.

The South Park system of Chicago is an excellent example of what can be done in this direction; but Minneapolis, Kansas City, and many others, are all examples of the same tendency. In fact, *there is a danger that the new fashion of city will be almost as stereotyped as the old.*

Provision of New Parks.
Special Assessment Principles.

The need for parks in the outskirts to provide for the growth which must come is everywhere realised, and during the last few years there has grown up a system of acquiring such parks for the public by means of a special rate or levy made by the Park Commissioners on all land in the neighbourhood, the value of which will be improved by the presence of the park. In this way many large areas have already been secured at Kansas City, Minneapolis, and elsewhere at little or no direct cost to the ratepayers, and it has been found in practice that the betterment in value of the property in the neighbourhood of the park more than recoups the owners for the small special rate they are asked to pay.

From fifty to 100 years ago London provided itself with a considerable number of new parks in the ring of open land just outside the then built-up area, and it is due to the foresight of our predecessors that we possess such parks as Regent's Park, Battersea Park, Victoria Park, and many others, all now embedded deeply in a sea of bricks and mortar. It is noteworthy that most of these parks were in those days provided at Government expense.

We may well ask ourselves whether we should not now be securing *further and larger breathing spaces around the built-up area of all our large towns,* and we might perhaps at the same time take a leaf out of modern American practice in order to relieve the ratepayers from any unnecessary burden.

The Preservation of River Banks and View-points.

In America it is now a well-recognised practice that *river banks and valleys should as far as possible be preserved for park purposes, and that view-points and hill-tops should be similarly preserved.*

Such a course is desirable not only from the point of view of amenity, but to secure the stream from contamination, and, at the same time, utilise land which in ordinary circumstances would be unsuitable for building purposes.

The Example of New Zealand.

In New Zealand there has been on the Statute Book for many years a law that the banks of all streams and rivers shall be reserved for a width of a chain or half a chain in width, and a special Government department has been set up to deal with natural beauty spots or "scenic reserves."

This but follows the still broader example set by several of the early New Zealand towns in entirely surrounding the township with a broad belt of townlands half a mile or so in width. The example of the park lands at Adelaide is, of course, well known, but it is not so generally known that Christchurch, Wellington, New Plymouth, Dunedin, and other towns in New Zealand were provided with a similar "town belt," and in several instances these park lands still remain the property of the town. In most New Zealand towns plots of land are also set aside for education endowment and other public purposes.

The question of municipal or State land purchase on a large scale has unfortunately in the past been made a political one, but from the national point of view it is worth while to consider whether it would not be well that *large areas of land around all towns should be acquired for future public use,* for agricultural purposes, the training of large masses of troops for defensive purposes, and for public health and recreation.

Street Planting.

Not only is it necessary to preserve the hill-tops and valleys and other natural beauties, but as far as possible the amenities of town life. In most communities there is a considerable proportion of the population which enjoys reducing everything to a dull level of ugliness, and seems almost to take a delight in removing everything in the nature of a tree or shrub.

The maintenance of trees and grass is always a troublesome question in England, especially in the neighbourhood of our manufacturing centres; but in America, although they have equally busy manufacturing districts, it seems quite easy to dispense with forecourt fences and to throw open stretches of greensward right up to the house itself. Such a town as Rochester, U.S.A., or Detroit, for instance, where thousands of motor-cars are manufactured every year, despite the absence of fences there is abundance of grass and trees, and nothing can surpass such towns as Los Angeles and other towns of the West and Middle West in this respect. Public opinion is all in favour of freedom, and no one thinks of doing damage to either trees or grass.

The way in which trees are ruthlessly cut down in this country whenever an estate is developed still leaves room for education, and the same process of destruction takes place wherever our countrymen settle. It would be a good thing if a licence had to be obtained from the local authority before cutting down any tree of over twenty years' growth, but this is a reform which has yet to come.

Control of Advertisement Hoardings, etc.

The control of street advertisements and hoardings comes within the powers given under the Town Planning Act, and here, too, public opinion is coming round to the view that advertisements need not necessarily be ugly.

They very often are, it is true; but this is more often due to want of thought than deliberate intention to offend. Too often the landscape along our railway routes and main roads is stamped for ever in our memories with "Pott's Pink Pills" or "Biles' Bilious Beans," writ large in the foreground. Such monstrosities ought for ever to consign these goods to perdition, but short of this all such advertisements should be subject to annual licence by the local authority and a good stiff licence fee per square foot.

Progress under the Act.

Some impatience has been manifested in various quarters at the slow-moving machinery set up under the Housing, Town Planning, etc., Act, 1909, under which a town-planning scheme takes years from the time of its inception to the date of its final approval.

In the six years that have elapsed since the Act was passed some 132 municipal town planning proposals have been before the Local Government Board in England, and seventeen in Scotland, but so far only five schemes have been finally approved. The position at December 31, 1915, was as under:—

England and Wales.	No. of Schemes.	No. of Local Authorities.	Area of Schemes.
Schemes finally approved ...	5	4	Acres. 10,265
Schemes submitted to Local Government Board for approval	4	4	4,058
Schemes authorised to be prepared...	112	78	180,498
Applications made for authority to prepare town-planning schemes	11	10	38,508
	132	91 (net)	233,329

Note.—Preliminary notices for other schemes have been served by about thirty local authorities.

At first sight one is inclined to regard this as a poor result for so much work, but in some ways it is well that such an important matter as laying down the future of our towns not be rushed through in a few months. work which needs both experience and ledge—experience of the needs and kno of the possibilities of the particular to well as a broad understanding of wh elsewhere been achieved.

The Civic Survey.

The establishment of tentative exper in civic survey work for particular are revealed to some extent the mass of pr ary information and statistical data ne to a full understanding of the proble few, if any, cases is it possible for a n grasp the details of the many-sided issues beset the problem of town planning, a civic survey is an attempt to bring t and collate the whole of the available in tion in a graphic form which will app only to the professional town-planne to the members of municipal counci others who often have not the time to p study the problems affecting their town.

The heads under which such informa most profitably grouped may be taken a

(1) The site: (*a*) Topography; (*b*) hist
(2) The industries: (*c*) Growth of com
    (*d*) causes and direction of gro
(3) The transit: (*e*) Traffic requirem
    origin and directions; (*f*) water
    railway traffic, road traffic.
(4) The enjoyment of life: (*g*) Health r
    ments, water, sanitation, fire prev
    (*h*) amenities, architecture, park
    playgrounds.

And last, but not least:—

(5) Financial considerations: (*i*) Land
    and property; (*j*) rating, taxati
    loans.

It may seem to some that this covers as wide a field as the examinations Surveyors' Institution. If so, it is a to the skill and forethought of those wh planned the Institution's examinatio embrace the many-sided activities of our sided profession.

Conclusion.

In matters of town planning, howev must realise that to foresee and provide whole future growth of our towns is n man's job, but many.

Every profession and every business right to be heard, and the plan itself m the result of whole-hearted co-operation b the surveyor, the engineer, and the archi

In the town plan an attractive site is o good without proper means of communi and efficient buildings.

The most perfect of communications b by road, or by water will be unsatisfactory the site is wisely chosen, properly sur properly drained, and properly built.

The most attractive design or group buildings will be of no avail unless the first of all suitable, the roads are pr graded, and the means of communi the very best that can be obtained.

Co-operation, therefore, between the fessions is necessary from the earliest of a town-planning scheme, and so far a Institution is concerned we can rely up willingness to do its share in co-operatio the architect and the engineer in the imp work of planning the future of our towns.'

COMPETITION NEWS.

It must be understood that the following paragr printed as news, and not as an advertisement; an while every endeavour is made to ensure accuracy, we be responsible for errors that may occur.

Town-Planning Scheme, York.

Professor Abercrombie, the adjudicat the competitive schemes submitted fo town planning of the suburbs of York recommended that the three premiums be as follows:—1, Mr. R. Dann, Crawley, Su 2, Mr. M. A. Piercey, Warrington; 3, M Noel Stephen & H. O. Burroughs, Liver and he also commends a scheme subm by Messrs. Allen, Thompson, & Thorp London.

ENERAL NEWS.

The R.I.B.A. Annual General Meeting.

ie annual general meeting will be held [onday, May 1, to consider the annual Report ie Council for the official year 1915-16.

New Academicians.

a general assembly of the Academicians Associates, Mr. David Young Cameron, A.E., ter; Mr. Maurice Greiffenhagen, painter; Mr. Bertram Priestman, painter, were ed Associates of the Royal Academy.

tional Portrait Gallery—New Trustees.

e Right Hon. L. Harcourt, M.P., and Herbert Frederick Cook have been inted Trustees of the National Portrait ry in place of the late Lord Ronald erland Gower and of Lord Fitzmaurice. the new Trustees are owners of important ollections.

Timber for the Army.

addition to the Defence of the Realm lations made by an Order in Council res it lawful for the Army Council or any n duly authorised by them to enter on land for the purpose of inspecting and ing trees, whether standing or felled, and ke possession of any such trees, and of land ildings for the purpose of felling standing converting trees, or storing or removing or converted trees; further, to take ssion of any plant used or capable of being for the above purposes, and of any vehicles, notives, or animals required for the port of trees or plant. Housing accomtion for workmen employed for the above oses may be provided by taking possession y land or unoccupied premises.

The Paris Bon Marché Fire.

e British Fire Prevention Committee issued one of their Red Books (No. 202) in ct to the Paris Bon Marché fire of November The report is illustrated, and indicates ast extent of this extraordinary fire in a ing that covered no less than some 50,000 ., and had an Auxiliary Military Hospital s fifth floor. The estimated damage was ess than £560,000, but fortunately no were lost owing to the precautionary ires taken to obtain ready means of exit the hospital referred to. It is pointed hat extensive fires of this kind have been y avoided in this metropolis by the fire ntive measures embodied in the London ing Acts and other enactments, and put ce by the District Surveyors, the London ty Council, and the Fire Inspection Depart- of the London Fire Brigade. The manner iich the great Paris Bon Marché fire was ed by the Paris Fire Brigade is made the ct of favourable comment in its report.

A Threatened Hull Monument.

interesting lecture on "The Merchant nturers of Northern England at Home and ad" was delivered in Hull recently by Maud Sellers before the members of the Riding Antiquarian Society. In replying vote of thanks, which was unanimously d, Dr. Sellers referred to the condition of old Grammar School. She had heard it l that the fine old building might be ved to make way for a modern structure. a step, she declared, would be an act of alism. It was a building in which the nant Adventurers of Hull used to hold meetings.—Mr. T. Sheppard, curator of Hull Museums, moved a resolution urging he Vicar and Churchwardens of Holy ty the necessity of ensuring the preservation e old Grammar School and pledging the ty to use its influence to this end, and orising its executive officers to take any n they consider necessary, whether by s of the Ancient Monuments Acts or wise. The motion was seconded by rman Brown.—Mr. J. Bilson, in supporting id he believed that the vicar and wardens red the property by subscriptions from ns who thought they were ensuring its rvation for all time. The Society ought ke the strongest possible measures to save The resolution was carried unanimously.

Pre-Raphaelite Pictures for the Nation.

It is officially announced that the Trustees of the National Gallery, with the aid of the National Art Collections Fund, have acquired from the Rae Collection a number of pictures by Rossetti and Ford Madox Brown.

Pict Chief's Dwelling.

It is stated in the Press that a spacious subterranean dwelling-place, supposed to be the home of a Pictish chief and his followers, has just been discovered by a Tiree crofter in the Kilkenneth district of that island. The structure is octagonal in shape, and is separated from an encompassing wall of the same shape by a passage 4 ft. wide and 5 ft. high. About 80 ft. of this passage has been investigated.

The Ideal Village Public-House.

Outlining the ideal of the new villages, which it is hoped will spring up and be peopled by soldiers at the close of the war, Professor S. D. Adshead, F.R.I.B.A., says that at the entrance to the village would be the village green, and the most conspicuous building to be seen from it would be the village public-house. The building would not be the resort of wastrels, but would be the social centre of the village. As seen from the outside, a conspicuous feature would be a verandah, where refreshments would be served out of doors. A door from the verandah would lead into the bar, but a second entrance would lead into a small hall where would be held all sorts of alfresco entertainments, including cinema shows.

Hampstead Garden Suburb and Housing for Officers' Families.

A meeting of the Housing Association for Officers' Families was held recently at No. 38, Bryanston-square. Lord Milner, explaining the objects of the Association, said one of their greatest difficulties after the war would be to find adequate house accommodation at a low cost suitable for people who had been used to a life of reasonable comfort and refinement. There were two branches of the Association's scheme. In the first place they proposed to provide colonies of houses or flats in suitable localities. It was proposed to add to the houses institutions like a club, a communal dining-room, tennis courts, etc. About £15,000 was required for the provision of the homes which it was proposed to erect in the Hampstead Garden Suburb, and about £4,000 would be necessary for their social amenities. Mr. Henry Vivian said the Industrial Provident Society had been registered as the South Wood Court, Ltd., and the site for the first group of fifty-three flats was on the south side of Hampstead Garden Suburb. It is not intended to begin building operations until the end of the war.

Architects and Town Planning.

On the 17th inst. the Liverpool Architectural Society held its annual meeting, at the resumption of the sixty-eighth session, in the rooms, 13, Harrington-street. The adopted Report showed a membership of 106, and that twenty-nine members and Associates, or rather more than one-fourth, had joined the forces, generally with commissioned rank. In regard to the Town Planning Act, the Council held that if architecture is to take its proper place in regard to town planning the Council consider it is necessary that an architect should be professionally engaged on each scheme during the early stages of its preparation, and this is a condition which can only be brought about at the instance of the Local Government Board. Officers were elected as under:—President, Mr. E. Percy Hinde; Vice-Presidents, Mr. G. Hastwell-Grayson and Mr. T. Taliesen Rees; Hon. Secretary, Mr. Richard Holt; unofficial members of the Council, Messrs. H. M. Appleyard, W. Glen Dobie, T. Edgar Eccles, C. W. Harris, P. C. Thicknesse, A. Thornely, and W. E. Willink (Fellows), and Messrs. L. P. Abercrombie and S. M'Laughlan (Associates); Hon. Auditors, Messrs. F. G. Briggs (Fellow) and L. B. Budden, M.A. (Associate). A paper, copiously illustrated by lantern slides and large prints, was contributed by Mr. Stewart Bale, on "The Work of an Architectural and Commercial Photographer."

A Deceased Builder's Estate.

Mr. Joseph Hill, of Gainsborough, Lincolnshire, builder, a director of Messrs. Shipley Brothers, Ltd., who died on February 10 last, aged seventy-three years, left estate of the gross value of £9,043 0s. 1d., of which £368 14s. 11d. is net personalty.

The Institution of Civil Engineers.

The Council of the Institution of Civil Engineers have made the following awards for papers read and discussed during the session 1915-16:—A Telford Gold Medal to Sir John Benton, K.C.I.E. (Eastbourne); a Watt Gold Medal to Sir George Buchanan, C.I.E. (Rangoon); a George Stephenson Gold Medal to Mr. F. W. Carter, M.A. (Rugby); and Telford Premiums to Mr. C. Carkeet James (London), Mr. D. E. Lloyd-Davies (Cape Town), and Mr. W. T. Lucy (Oxford). The awards for papers published in the *Proceedings* without discussion will be announced later.

Afforestation Schemes.

In a Memorandum which Mr. W. E. Whyte, Clerk to the local authority of the Middle Ward of Lanarkshire, presented to the Congress on Home Problems after the War, he pointed out that by the prosecution of suitable and approved afforestation schemes many important results will be secured. For example, the resources of the country will be developed (it was never so necessary before that this consideration should receive effect), and the most suitable of employment can be afforded to disabled soldiers and sailors. The need for timber in future years, as a result of the devastation which has taken place and the exceptional demands which have had to be met in connection with the war, will be exceedingly great and the prospects commercially will all be greatly enhanced.

A Shakespeare Exhibition.

In celebration of the Shakespeare Tercentenary a special temporary exhibition will be held at the Victoria and Albert Museum of a number of Shakespeariana acquired in past years largely under the Dyce, Forster, and Charles Kean bequests, which are not ordinarily shown to the public. The collection includes copies of the first, second, and third folio editions, as well as several early quarto editions of single plays, engravings of Shakespeare portraits, old playbills, etc. The exhibition has been arranged in the Book Production Gallery on the first floor (Room 74; access by the north-west staircase). Commemoration medals in silver and bronze have been issued by the governors of the Shakespeare Memorial Theatre, Stratford-upon-Avon. The medal, which is made from the design of Mrs. Dick, wife of the curator and librarian at the Memorial Theatre, bears on one side a portrait of Shakespeare, with the words "Shakespeare Tercentenary," and on the other his coat of arms and the inscription, "William Shakespeare, born 1564, died 1616. Stratford-upon-Avon, 1916."

Organising the French Building Trades.

A federation of members of the building trades has been established in France with the object of taking stock of the nation's requirements after the war, and, with the co-operation of the Government, facilitating the prompt resumption of normal economic life. The prospectus of the organisation says:—

"The State should make an immediate inventory of the present resources of France in materials of all kinds, in order to estimate the extent and character of necessary imports. These imports should comprise—

1. The materials necessary for putting into good condition our railways and to build the railways of Morocco.
2. The materials necessary for rebuilding homes and workshops.
3. The machinery and other plant needed properly to equip our factories and workshops.
4. The raw materials necessary for manufactures and trade."

It is in the interest of each individual to determine immediately the approximate quantities of goods which he will need, the merchandise which he can furnish, and the financial resources of which he can dispose, and to indicate the credit of which he may have need.—*Ironmonger.*

Leading Contents.

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ILLUSTRATIONS.

Grocers' Hall.

OUR inset plates illustrate Grocers' Hall, and an article on the Company will be found on page 317. We dealt with the Mercers' Company in a similar manner in our issue of March 31, the Drapers' Company being the subject of a third article to appear on May 12.

MEETINGS.

Monday, May 1.

Royal Institute of British Architects.—Eighty-second annual general meeting. 3 p.m.

The Royal Institution.—Annual meeting. 5 p.m.

Tuesday, May 2.

The Royal Institution.—Mr. Laurence Binyon on "Indian and Persian Painting." 3 p.m.

Wednesday, May 3.

Institution of Civil Engineers of Ireland.—Ordinary meeting. 8 p.m.

Royal Archæological Institute.—General meeting. 4.30 p.m.

CORRESPONDENCE.

The Wonder of Work.

Sir,—I have been much interested with Mr. Pennell's standpoint on the "Wonder of Work," but think he has overlooked a few points which bear on the subject. It is only a comparatively small number of buildings, even now, which involve great engineering problems, and I therefore cannot see that the points which Mr. Pennell suggests are likely to revolutionise our minds on architecture. Besides the mediæval cathedral, which involved great constructional problems, we have as a legacy of the past the manor house and small church, which involved none, and each is perfect in its way. If Mr. Pennell wishes us to see and understand that great engineering works have a picturesque aspect he is revealing nothing new to us; if he wants to persuade us that the Vulcan Shipbuilding Yard is as great a work of art as the interior of Reims he is essaying an impossible task, which not even his standing as an artist will enable him to accomplish. In short, I find his attitude is as intolerant and indefensible as that of Ruskin, and should much like to know whether he praises or condemns the purely artistic expression of the Teuton as shown in the great war monuments erected all over Germany. Possibly Mr. Pennell will enlighten us further?

A Searcher after Truth.

BOOK RECEIVED.

Elementary Strength of Materials. By Ewart S. Andrews, B.Sc. (London: Chapman & Hall. 4s. 6d. net.)

ARCHITECTURAL SOCIETIES.

Nottingham and Derby Architectural Society.

The fifty-third annual meeting was held on Tuesday, April 18. The chair was taken by the President, Mr. Harry Gill, M.S.A. The Council reported that one member and one Associate member had been elected, and to M. Valentin Vearwyck, a Belgian architect of note, at present residing in Nottingham, the privilege of honorary membership has been granted until peace is declared. The death of one member, the resignation of two honorary members, four members, and the exclusion of one Associate had left a total membership of 116, a decrease of eight. A suitable greeting in the name of the Society had been sent at Christmas-time to the twenty-six members serving their King and country. Although the profession had suffered more than any other in consequence of the war, no case of absolute distress had been brought before the Emergency Committee of the Society. The Hon. Secretary had assisted the R.I.B.A. War Committee, but for some reason the results had not been commensurate with the time and trouble involved. The Royal Institute now urge all architects suffering from the effects of the war to take up munition work, and several members have already qualified. The members over military age were asked by the Local Parliamentary Recruiting Committee to canvas under Lord Derby's Scheme and several members gladly gave their services. No summer excursion was held, but four visits to works proved interesting and instructive. Four sessional meetings were held, at which useful papers were read and discussed. Notwithstanding the decreased membership, the funds of the Society showed a satisfactory balance, and it was unanimously decided to send a donation of 3 guineas to the Architects' Benevolent Fund and invest £15 in the War Loan.—Mr. Spencer, the Hon. Librarian, reported that several members had generously contributed books to the library, and Mr. Hendy, who was now on active service, had lent the whole of his books until the war was over.—A motion "that the rules as to election of officers be suspended and the present officers continue until April, 1917," was unanimously agreed to.—The President, Mr. Gill, thanked the members on behalf of himself, the Vice-President, Mr. H. G. Watkins, and the members and officials of the Council for the renewal of their confidence, and hoped that before their extended term of office was completed brighter times would have dawned for them all.

OBITUARY.

Dr. R. Cochrane.

The late Dr. Robert Cochrane, LL.D., I.S.O., F.I.A., a Fellow of the Royal Institute of the Architects of Ireland, was elected a Fellow of the Royal Institute of British Architects in 1892. He was architect of H.M.'s Office of Works, Dublin; principal surveyor under the Irish Board of Works; President (1911-12) of the Royal Society of Antiquaries of Ireland, and Inspector of Ancient Monuments for Ireland; in 1903 he was made a Companion Imperial Service Order. Dr. Cochrane was the architect of the Post Office, Armagh, and of the additions that were made, 1896-7, to Queen's College, Belfast, for the physics and engineering sides, comprising the pathological and physiological laboratories, with the "Harland," "Donald Currie," "Jaffe," and "Musgrave" Laboratories, and the biological laboratory, and also for the new students' union, with the "McMordie Hall," having a capacity for 400 people, and the students' dining, reading, committee, and other rooms and quarters.

Mr. G. Wormal.

The death took place recently of Mr. George Wormal, architect, at his residence, Rowley Park, Stafford. Mr. Wormal, who was a native of Lincoln, took up his residence at Stafford in 1872, and carried on his profession there until two or three weeks ago, when he was laid aside by illness. Many public and private buildings in the town and district were designed by him. He entered the Town Council in December, 1883, was Mayor of the borough in 1893-4, an alderman from 1895 to 1901, when retired. For seven years he was a membe the Stafford Board of Guardians.

Second-Lieutenant J. C. Bucknill.

Second-Lieutenant John Charles Buck Hampshire Regiment, who was killed January 22, was the son of Colonel J. Bucknill, R.E., of Thornfield, Bitterne, Ha He was educated at Wellington College an Emmanuel College, Cambridge, whence proceeded B.A., and then became an archi He obtained a commission in the Hamps Regiment in September, 1914, and went it to the Persian Gulf.

Mr. H. P. Horne.

The death is announced of Mr. Herber Horne. He was the architect of St. Jo Church, Ealing Dean, and of the cha St. George's, Hanover-square, burial groun Bayswater-road, W., 1894-5, for which mural paintings were executed by the Mr. Shields; he also made the designs for font, in red Cippo and yellow Sienese ma of St. Luke's Church, Rosemary-road, Cam well. Mr. Horne was distinguished by love for the arts, he was a high authority the work of Botticelli, and he wrote the in duction to Mr. Randall Davies's book on history of St. Luke's (Old) Parish Chu Chelsea.

THE LONDON COUNTY COUNCIL.

The fortnightly meeting of the Lon County Council was held on Tuesday of week in the County Hall, Spring-gardens, S Mr. A. F. Buxton, Chairman, presiding.

Loans.—Loans were granted to boro councils as follows:—£2,773 to the Bermon Borough Council for electricity purpo £5,000 to the Poplar Borough Council for st paving works; £3,170 to the Wandsw Borough Council for street improveme and £27,500 to the Woolwich Borough Cou for electricity purposes.

General Line of Buildings on the Southern of Euston-road between Southampton-street Fitzroy-street.—On the recommendation of Building Acts Committee it was agreed the decision of the High Court be obtaine the matter of the case stated by the Trib of Appeal relating to the general line of build on the southern side of the portion of Eus road between Southampton-street and Fitz street.

Blackwall Tunnel.—The Highways Commi reported that it is necessary for certain rep to be carried out to the asphalt paving portions of the carriage-way of Black Tunnel, and suggested that tenders should invited from selected firms. This was agree

Southern High-level Sewer, No. 2—Sale Land.—It was reported by the Main Drai Committee that application had been m by the South-Eastern and Chatham Rail Company for the Council's consent to construction of additional sidings over southern high-level sewer, No. 2, at Black Station.

South-Eastern and London, Chatham, Dover Railways Bill.—On the recommenda of the Parliamentary Committee it was agr to oppose the South-Eastern and Lond Chatham, and Dover Railways Bill with object of securing the rejection of the po relating to Charing-cross bridge.

FIFTY YEARS AGO.

The Law Courts Competition.

The judges of designs have selected additional architects, and withdrawn objectionable conditions. The list of twe now stands thus:—Mr. H. R. Abraha Mr. E. M. Barry, Mr. R. Brandon, Burges, Mr. T. N. Deane, Mr. Garling, Gibson, Mr. H. F. Lockwood, Mr. Sedd Mr. Scott, Mr. Street, and Mr. Waterhouse

[*** From the *Builder* of April 1866.—Ed.]

.. The ..
y Companies
and
Their Halls.*

No. 2.

The Grocers' Company.†

E Grocers' Company grew out of an
earlier association entitled the Pepperers'
Guild, the first mention of which occurs
when the Gilda Pipariorum is mentioned
hers in the Pipe Roll as being fined
marks for not having paid the King's
Between 1231 and 1345 nine
rs, beginning with Andrew Bokerel,
s mayors, and the residence of Bokerel,
" Bokerels Bury," has given its name
klersbury. The Pepperers inhabited
ane, now known as Queen-street, and
attended service at the church of
holin in Watling-street. They were
connected with the duty of weighing
ty, and in conjunction with the Ropers
othecaries nominated an officer to
rge of the King's beam.

beam weighed by the aver-de-poys
r peso grosso, and it is likely that the
rossarius," not then connected with any
ok its origin from the use of a beam to
h heavy merchandise.

tron," by which wool and "speciaria"
ghed, was used by the Woolers and the
ades.

epperers' trade, which included spices
inds, was a very important one in
en spices were in universal use both
ise unsavoury food and to mitigate
lts of insanitary conditions. In the
ars of the reign of Edward III. the
Pepperers disappeared, and it is probable
e of its most prominent members were
the exaction of forced loans to enable
g to carry on his French wars. In
e Italian bankers, who had largely
the King, failed, and the general
insecurity and depression was calcu-
nduce men to trust to mutual assistance
ty and success, and such security
st be attained through means of a

y 9, 1345, the archives of the Grocers'
record the foundation of the fraternity
erwards became the Grocers' Company.
honour of God, the Virgin Mary,
ony and all saints, the 9th day of
45, a Fraternity was founded of the
of Pepperers, of Sopers-lane, for
unity, to maintain and keep themselves
: of which Fraternity are sundry
. founders, and donors, to preserve
Fraternity."

locument is signed by twenty-two
aded by William de Grantham, and
llowing year twenty of the members
gether in the City house of the Abbot of Bury St. Edmunds, when they chose two wardens and drew up ordinances. Membership was to be limited to the "Pepperers of Sopers-lane, canvassers of the Ropery and Spicers of the ward of Cheap, and other people of their mistery wherever they reside." They bound themselves to contribute to the common fund, to wear a livery, and to submit disputes to the arbitration of the wardens, to maintain a priest, and to attend each other's funerals. Those who fell into poverty were to be helped out of the common fund, and on St. Anthony's Day they were to attend mass at St. Anthony's Monastery in Threadneedle-street and dine together afterwards. Three years later they dined together at the Rynged Hall in St. Thomas Apostle, and attended the adjacent Church of St. Anthony. At a later date the Cornets Tower, Bucklersbury, became their meeting-place. For twelve years the records are continuous up to 1358, when they are interrupted, and when in 1373 the record is resumed the fraternity had become the Grocers' Company (Compagnie des Grossers).

In the interval between the two dates two notable members of the fraternity, John Philipot and Nicholas Brembre, served as wardens, and afterwards became sheriffs. They were both knighted by King Richard II., together with William Walworth, for services rendered in the Wat Tylor riots. At the King's accession the grant of a subsidy to the King was made conditional on the appointment of two treasurers to superintend the application of the money, and Philipot and Walworth were appointed to fill the posts. It is stated that Philipot used part of the money to equip a fleet which cleared the North Sea and Channel of pirates.

Brembre, who had filled the office of mayor four times, was involved in the King's fall, and was one of the victims of the Merciless Parliament and died at Tyburn.

It was at this date that the weighhouse and superintendence of public weighing in the City was first controlled by the Company. John Chirchman, a grocer, built a house at Wool-wharf Key for the weighing of wool, and was appointed public weigher for life. He apparently made over his rights to the Company, who from this date to the end of the eighteenth century had the management of all the weighing in the Port of London.

The fraternity rapidly grew in power and importance; the City authorities looked to them to protect the interests of their trade, directing them to watch over non-members of the Company bringing spices or similar goods into the City. The goods so imported were to be sold within forty days of their arrival, and were not to be sold by the "foreigners" to one another. Regulations were also laid down as to "garbling" or checking fraud with regard to spices and drugs which were sold by weight by the compulsory clearing of such goods, and in 1447 the Company were appointed official "garblers" for the whole kingdom outside the City, in which the Court of Aldermen had the right of appointing the "garbler."

In 1411 the members purchased the chapel belonging to the family mansion of Lord FitzWalter, the hereditary standard-bearer of the City, and in 1427 the mansion itself. Their property extended from near Old Jewry to the banks of Walbrook, which then ran through the middle of the site now occupied by the Bank of England, and discharged into the river near the site of Cannon-street Station. The approach to the site was by Coneyhope-lane, now known as Grocers' Hall Court.

The foundation-stone of the Hall was laid on May 8, 1427, and on February 5 next the members dined together there at a cost of £5 6s. 8d. The building consisted of a hall for meetings, a parlour, probably for the use of the wardens, a buttery, and a pantry, and was completed in 1428. The garden was laid out at considerable cost, and was used not only by members of the Company, but by neighbours for playing bowls and other games.

In 1428 the first charter was granted to the Company, under which they became a legal corporate body with power to hold land within the City and suburbs to the value of twenty marks "towards the support of the poor of the Company, and of a chaplain to pray for the King while living and for his soul when he was dead, likewise for all persons of the said mistery and commonalty and the souls of all faithful deceased."

The right of holding land in spite of the Mortmain Act was extended by a charter of James I. to the value of £200, and by that of Charles I. in 1640, without limit, but it has always been held that this applies only to land within the City. The management of the Company's affairs was at first vested with two wardens of purveyors, who were chosen after an annual dinner held in the month of May. After the dinner the wardens were to come with garlands on their heads, and the Company were to choose for their three wardens for the ensuing year "those upon whom the garlands shall be set," and deliver to them papers and money belonging to the fraternity. In 1379 it was enacted that six members of the Company were to be chosen to assist the wardens for the following year, which was the origin of the Court of Assistants, which were fixed in 1640 at fifty-one assistants and four wardens; it is now considered that thirty assistants are sufficient to manage the affairs of the Company.

The troubles of the Reformation did not affect the City Companies, which conformed sufficiently to the law to escape danger. Richard Grafton, who became Master of the Company in 1563, though apprenticed to a

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icle on the Mercers' Company appeared in
of March 31, and one on the Drapers'
will be given in our issue of May 12.

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hers.

grocer, published an edition of Tyndale's Bible known as Matthew's Bible. He was also instrumental in securing the great religious houses of Grey Friars, St. Thomas, Bethlehem and Bridewell for the services of the poor. Latterly he fell into poverty and was assisted from the funds of the Company.

In 1558 Queen Mary demanded a loan from the City, towards which the Company had to find £7,555; this was the first of many enforced loans, which became a grievous exaction in the times of the Stuarts.

By a charter of 4 James, 1606, the Grocers had obtained a renewal of their privileges in connection with the sale of all goods, including drugs, and no idea was apparently entertained that any dissolution of the bond between two sections of its members was likely to take place. Throughout the reign of Elizabeth and her successor there was general complaint of the incompetence of apothecaries, the wardens frequently seizing bad or adulterated goods, and in 1617 the King moved in the matter and granted a separate charter to the Apothecaries, restraining the Grocers and other Companies from keeping an apothecaries' shop and from exercising the "mistery" in London or within seven miles of it, requiring every apprentice to serve his full term and to obtain a certificate from the College of Physicians, and conferring on the new society powers of search, seizure, and destruction. On the Grocers complaining the King rejoined, "The Grocers who do complain are but merchants."

In 1692 Parliament demanded £9,000, and the Company's plate had to be sold to provide the funds needed, but this was willingly paid, as the City staunchly supported the cause of popular liberties.

The Committee of Safety appointed by Parliament to watch over the interests of the nation met in Grocers' Hall.

Later, the City recognised the advantages of a restoration of the monarchy, and General Monk was invited to a banquet at Grocers' Hall in 1660, and was afterwards made free of the Company, which was the first instance of the honorary bestowal of the freedom in recognition of public services. When Charles II. made his State entry into London he accepted the office of Sovereign Master of the Company at the request of Sir Thomas Alleyn, one of its members, who was then Lord Mayor. He was never formally admitted, but it was ordered that the feast usually held at some date in May in commemoration of St. Anthony should in future be held on the 29th and called the Restoration Feast.

The Great Fire of 1666 added to the difficulties which had arisen through enforced loans, as all the Company's premises and property were reduced to ashes. The Company's main resources for funds in the shape of fines levied on the reletting of houses failed them, the value of building sites fell, and the rents obtained were not sufficient to meet the payments for charitable purposes charged upon them.

The rebuilding of the Hall was felt to be absolutely necessary, but only £700 could be collected by a personal appeal to members. Sir John Cutler at this juncture loyally and liberally aided the Company by building at his own expense a dining-room and parlour, and thus providing a meeting-place for the members; but in spite of Sir John's assistance it was found impossible to complete the rebuilding, and in 1672 the Governors of Christ's Hospital, to whom the Company were liable for payments charged on properties bequeathed to them, took possession of the Hall as security for arrears due to them. At last with difficulty the arrears were paid off and the Company resumed possession of their Hall. A great effort was subsequently made to complete the buildings, which, it was held, might be a source of revenue, and it was finally done by the aid of Sir John and others.

In 1690 a new charter was granted to the Company under William and Mary, and the King served the office of Master in 1689, and directed that three fat bucks should be sent annually in perpetuity to Grocers' Hall, but the Royal Bounty did not survive the King's reign.

The turning-point in the fortunes of the Company came in the year 1694, when the Bank of England was founded. Business was started in the premises of the Mercers' Company, Sir John Houblon, a grocer, being the first Governor.

In October the business was transferred to Grocers' Hall, under an agreement which provided for an eleven years' tenancy on payment of a fine of £5,000 and a loan of the like amount. The Bank continued to be the Company's tenants till 1734, when the house and gardens, which had been the property of Sir John Houblon, in Threadneedle-street were bought, and the Bank of England erected from Sir John Soane's designs.

For nearly a century the Company maintained their position with difficulty, and could do little more than pay their way and discharge their obligations under their trusts; but at the end of the eighteenth century they were able to contribute considerable sums to private charities.

They offered their honorary freedom to William Pitt at a crisis of his career, and supported the Coalition when he took office in the face of a hostile majority in the House of Commons, their action contributing something towards his success in holding the position he had so boldly accepted. During the nineteenth century they were enabled to extend their benefactions, as, although not among the wealthiest guilds, they were not encumbered with trusts or involved by obligation through their connection with any trade or craft, so that the funds they possessed could be freely dealt with.

Architecturally, Grocers' Hall is not among the most interesting of the Livery Halls. Of the mediæval buildings which were destroyed by the Fire no adequate representation remains, and we can only gather that the old Hall was a large room with mullioned windows, with a room, or rooms, attached, and a buttery or other service accessories. The Hall of Staple Inn, with a few rooms added, probably represents what in mediæval times would have met the needs of one of the City Companies. As we have seen, the Fire caused such financial losses that the Grocers were for long unable to provide themselves with any premises to meet in, and want was met by buildings erected by private munificence, and completed after a lapse of years in what was probably a purely utilitarian manner. At the beginning of last century, in 1800, these buildings were replaced by a simple L-shaped building of modest dimensions, designed by Thomas Laverton, and containing the Hall and offices. The buildings did not utilise a site which had become very valuable to full advantage, and the buildings were demolished and the fourth Hall erected.

The Company's late surveyor, Henry Cowell Boyes, designed the present Hall and offices, which were erected between the years 1889–93 at a cost of about £100,000. An ingenious use was made of a valuable site, which was utilised by the erection of a large block of revenue-producing offices facing Princes-street, at the extreme limits of which driving ways give access to a courtyard on the farther side of which the new Hall is placed. The planning of the new buildings is good, though the junction between the two wings is somewhat awkwardly worked out, and the disposition of the main entrance and staircase and its connection with it is a little cramped and indirect. The external detail of the new building is Jacobean in its rendering, but there is a want of cohesion and uniformity between the treatment of ground and upper stories. The internal design is more satisfactory, though in parts too ornate. The staircase and Court-room are the best-designed portions of the new building. The hall, though a fine room, is a little tame, while the Drawing-room is over-elaborated. As a whole it forms a convenient and suitable building for the purposes to which it is put, though it is to be regretted that the "Wren" note, which is so marked a feature of the old Halls, was not adhered to.

As will have been gathered, the functions of the Grocers' Company in connection with trade and commerce have become obsolete with the changes which have grown up during the last two centuries, and the Company have become increasingly an association closely connected with educational and charitable
work, although an exceedingly small por
their income is derived from trust funds.
give generous support to hospitals and
agencies for the relief of poverty and su
and have endowed scholarships at Oxfo
Cambridge for the assistance of poor s
which are awarded by selection an
competitive examination.

On the passing of the Endowed Scho
in 1869 the Company availed themselves
provisions of the measure to appropriat
of their obsolete charities for educ
purposes. Under this scheme £30,00
raised and applied to the establishmen
middle-class school at Hackney Downs,
was opened in 1876. The school met
want, and, as the fees charged were bel
cost price of the education given, a
subsidy was voted annually by the Co
of the Company's funds. After the pas
the Education Act of 1902 the Grocers
to an arrangement with the London
Council under which the school was
over to that body. Although the Compan
considered that London possesses the first
on their benefactions, they have had a lo
nection with the town of Oundle in Northa
shire, through a trust committed to th
one of their members in the sixteenth c
and have founded a secondary school
takes a high place among English public

Sir William Laxton, who was six times
of the Company, first in 1536 and last i
left certain house property to the Co
charged with the payment of £38
maintenance of a grammar school and
houses in Oundle. The Company were
to secure the Guildhouse at Oundle, a
it for a school and almshouse, and to
to the Master, £6 13s. 4d. to the ushe
£12 2s. 8d. to seven almsmen annually.
aside 24s. for repairs. The propert
bequeathed was worth about £50 a
The Company took possession in 157
regular reports of visits appear in their

After the Fire the Grocers were not in
tion to improve the schools, but a centu
the salaries of the master and ushe
increased and additions made to the bu
In 1875 the Court embarked on a larger
to provide education of a public
standard. The trusts under Laxton
were fulfilled by a school carried on in
building adapted for the farmers and tra
of Oundle, while a new school wa
adjoining, under the title of "The
Company's School, Oundle." Their su
Mr. Gwilt, designed the first school
and headmaster's house; his success
Boyes, the first science block and bo
house; while the present surveyor, Mr.
Blomfield, added a school hall with clas
and a new science block, a second bo
house, and workshops. Altogether the
pany have spent over £150,000 on the p
of land and in building at Oundle.
feature of the school is the exceptional
tion paid to modern subjects and the un
fine accommodation provided for that p

In the records of the Grocers' Com
is stated in a minute entered on August 1
when their existence was saved by the
liberality of their members in order "
might again become, as it once was, a nu
charities and a seminary of good cit
and it is claimed that the manner in
they have administered their revenues
with hopes expressed by their members o
centuries ago. Their original function
closely connected with an important in
and they served in the capacity now
by national or municipal department
they worthily fill in the present a gre
important position among institutions
relief of suffering and the promotion of
tion. This position is the more hon
and worthy since a very small portion o
revenues is derived from trust fund
work of the Company being almost
carried out by revenues arising out o
corporate property. Like many of the
Companies, they have been plundered
past, and have survived to gain a new pro
in the present through a rise in the v
urban property and wise administration
the community benefits by their existen
shares in the results of their prosperity.

THE BUILDING TRADE.

OUSE PROBLEMS AFTER THE WAR.

NDER the auspices of the Housing and Town Planning Council a Congress was held in London recently, and ted in our last issue, at which subjects were ssed which are of interest to the building A number of useful and practical tions were passed.

most important proposals for the ng trade were those calling upon the rnment to provide a sum of not less £20,000,000 for the carrying out of housing tions immediately after the war and for reparation by local authorities, meanwhile, sing schemes, in readiness for that eventu- so that the danger of serious unemploy- in the building trades may be avoided.

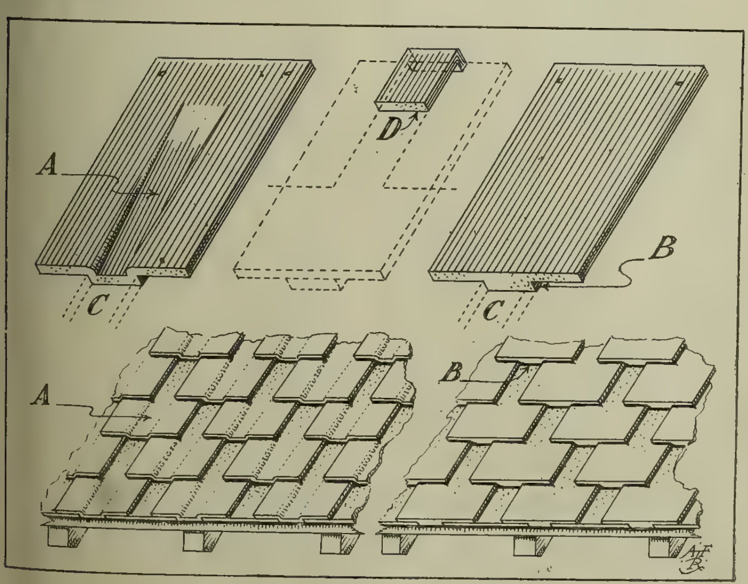
re is no doubt that the provision of l for housing purposes by Government e necessary, otherwise the present high of money and building materials will sly postpone the already urgently needed building and aggravate the shortage is clearly evident now.

debates on this problem brought out the causes of this shortage, viz., the sing attractiveness of other forms of ment; the increased cost of building; nore stringent requirements of local ities in regard to repair and alteration of to make them fit for human habitation; ndency of rates to rise with consequent e of rents; the increased dearness of ; the effects of the Finance Act of 1909; llection of rates and the compounding increased stamp duties and the costly ds of conveyancing, which hinder the r of land and houses; the areas which heduled for town-planning purposes, uncertainty which exists whilst schemes ng prepared as to what their provisions ely to be. The causes are thus shown complex in character, and no simple will meet the case. The Congress that the amendment of the Finance prevent the taxation of the profits of ise, already twice promised by Govern- should be carried into effect, and that npounding limit should be reconsidered. touching the question of finance, a e report was presented on the subject k Loans at Insurance Rates, by Mr. Branford, which will repay careful study; nts in a lucid form an analytical survey ntricate subject which is little under- utside banking circles, and should point the way to some form of credit banking for the purpose of providing housing finance on a more favourable basis than is at present practicable. A reform of this kind lies at the very root of the whole problem of cheap housing and the payment of an economic rent; it is earnestly to be hoped that the paper will attract the attention it deserves from those capable of giving effect to it.

A NEW ROOFING TILE.

MR. A. FLETCHER TREW, of Holmwood, Rusham Park-avenue, Egham, Surrey, has invented and provisionally protected a new roofing tile called the Surrey Roof and Weather Tile, which we illustrate, and he desires to correspond with makers and users of tiles and to arrange terms for their manufacture. By the use of this tile only 370 tiles are required to cover a square as against 554 plain tiles, hence the weight is reduced to 8¼ cwts. per square, and a similar saving in cartage, hauling, and roof timber is made possible.

The sketch explains the principle of the invention—A is the channelled and B the indented pattern tile, C the interspace tile, and D the spacer or loose indent. The invention is one by the use of which economy is promoted, and therefore will be interesting to many, though where reasons of economy are not paramount most architects would prefer the appearance of plain tiling.



A New Roofing Tile.

TRADE NEWS.

Boyle's latest patent "air-pump" ventilators have been applied to St. Matthew's School, Preston.

The Ancoats Hospital, Manchester, is being supplied with Shorland's double-fronted warm-air ventilating patent Manchester hospital stoves, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

An underground vault was constructed for the National Bank of India in Clive-street, and, owing to the proximity of the Bank premises to the river, water percolated into the vault very freely even after it had been rendered with cement plaster. A mixture of Pudloed cement was then tried and proved very successful.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The Plans Committee of the T.C. has sanctioned the following plans:—Alterations in connection with the premises No. 8, Queen-street, for the Northern Loan Company, Ltd.; alterations at 141, Union-street, for Messrs. Boots, Ltd.; alterations at 435-437, Union-street, for Mr. George Bowman, draper, additions to premises, College-street, for Miss Reid, Albyn-place; cold store at 457, Union-street, for Mr. William Findlay.

Arbroath.—A free gift sale in aid of the building fund of the new Arbroath Infirmary was recently held in Arbroath Auction Mart.

Aylesbury.—At a recent meeting of the U.C. plans were passed for the County Palladium and Picture-Dome to be erected in Exchange-street, Aylesbury, for Messrs. Field & Son, Ltd. Mr. Fred Taylor, Bourbon-street, Aylesbury, is the architect.

Bedford.—The following plans have been approved by the T.C.:—Temporary additions to carriage house, Holt-row, for Messrs. Clarabut & Plumbe; temporary coffee bar, 23, Kempston-road, for the Trustees, Soldiers' Home; new house, Castle-road, for Mr. T. Rogers; proposed gallery, The Palace, High-street, for the Bedford Palace, Ltd.; two water-closets and lavatory, the Pyghtle Works, for Messrs. J. P. White & Sons, Ltd.; bathroom, Abbey Cottage, Cardington-road, for Mr. M. T. Hurst-Hodgson; motor showroom, Cauldwell-street, for Messrs. W. Nicholls & Son.

Bradford.—Messrs. Brown, Muff, & Co., Ltd., have acquired possession of the block of buildings at the corner of Tyrrel-street and Ivegate, Bradford, for the extension of their premises.

Bridport.—The question of the proposed repairs to the Town Hall buildings has been referred to the Town Hall Committee to consider and report.

Bristol.—The Docks Committee contemplates erecting nineteen houses on vacant land under their management at King-street, Avonmouth, for the accommodation of men employed at the Docks.

Buckie.—Plans passed by the T.C.:—Engineering shop at the Patent Slip & Shipyard Company, Ltd.; motor shed in West Church-street, for Mr. William Logie; and alterations at 29, East Church-street, for Mrs. Geo. Paterson.

Burnham.—The Council has passed plans for a temporary workshop at 43, Adam-street, for Mr. W. T. Baker.

Cardiff.—The Corporation Electric Lighting Committee has approved a proposal for extending the Hayes sub-station at an approximate cost of £1,200.

Cullen.—The T.C. has received a plan from Mr W. E. Taylor of proposed alteration to house in Grant-street belonging to him.

Eastry.—The R.D.C. has passed plans from Messrs. Jennings & Duthoit, architects, for alterations and additions to "The Star" Inn, Tilmanstone, for Messrs. Leney & Co., Dover.

Edinburgh.—The directors of the Caledonian Railway Company have authorised the reconstruction of Slateford Station. The contract for the new buildings has been let to Mr. John Shirlaw, Carluke, while the heightening and lengthening of the platforms is being carried out by the company's men. The new overbridge will be provided by Messrs. P. & W. Maclellan, Ltd., Glasgow.

Egremont.—The D.C. has approved plans of suggested alterations to 58, Main street, for the London Joint Stock Bank.

Glasgow.—Glasgow Dean of Guild Court has granted the following linings:—The Tharsis Sulphur and Copper Company, Ltd., 136, West George-street, Glasgow, to erect buildings on Garngahill; Messrs. Redpath, Brown, & Co., Ltd., 19, Waterloo-street, Glasgow, to erect new buildings in Borron-street and North Canal Bank-street; Messrs. K. Cockburn & Co., Ltd., Clydevale Engineering Works, Cardonald, to make alterations on existing buildings at Cardonald; Messrs. Alexander Stephen & Sons, Ltd., Linthouse, to erect office, cloakroom, and

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* See also our list of Competitions, Contracts, etc., on page 322.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¼	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	9¼	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	9¾	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5½	5¼
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10½	10	10	8½	7½	7½	8
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	9½	10½	9	8½	8½	9
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	*6½*
Portsmouth	9½	9½	9½	9½	9½	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7½
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¼
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9½	8½	10	8	6¾	6¼	6½
Warrington	8¾	10½	10¼	10½	8½	10¼	9½	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7	7	7
Wigan	10	10½	9½	10	9½	10¼	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	11	8	10	8	7½	7½	7½
Worcester	8½	9½	9½	9	9	9	7½	6½	6½	6½
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

wcrkshop at Linthouse; Archbishop Magu
cther trustees of the Roman Catholic A
cese of Glasgow, to make alterations
cathedral in Great Clyde-street, Gl
Messrs. Barclay, Curle, & Co., Ltd., Whi
to erect sheds on subjects in South
Whiteinch. At a recent meeting of the
minute recommending the purchase for £
the St. Rollox Mills and ground adjoin
Garngad-road was approved. Part of the
will be used for street widening, whi
question of utilising the rest for the erec
dwelling-houses for the poorest classes
considered.

Goole.—The U.D.C. has approved pl
addition to office, Carlisle-terrace, for
Townend & Co.

Hastings.—The Corporation has decide
an improvement scheme which will cost £
Under the scheme the parade extension b
a public promenade, with a bandstand.
items include shelters and a pavilion.

Irvine.—Irvine Dean of Guild Court has
plans of an extension to Mr. A. Cunnin
hosiery factory in Ayr-road, and of a
house or music hall to be erected by the S
Kinemas, Ltd., in Montgomery-street

Kingstown.—The U.C has decided to
to the L.G.B. for sanction of a loan amo
to £76,218 6s. for the erection of 271 hou
the working classes.

Longniddry.—About forty cottages are
erected at Longniddry, on Lord Wemyss's
for the accommodation of disabled s
These houses are being put up in connecti
the scheme promoted by the Scottish Ve
Garden City Association.

Newcastle.—At a recent meeting of the
and Charities Committee of Newcastl
pcration the application for a lease
Singleton House site in Northumberland
on which it is proposed to erect hotel an
premises, was dealt with.

Ossett.—The T.C. has approved the fo
plans:—Addition to Springwell House a
version to two dwelling-houses, for Messr
Illingworth & Son; carbonising place a
chimney at Paleside Mill, for Messrs. A.
Sons; wood shed in Park-square, for Mr.
Waite.

Rhyl.—The U.D.C. has passed a plan
motor garage by Mr. Thos. Lloyd at
Plastirion-terrace.

Richhill.—The Armagh Farmers' Co-op
Society, Ltd., has decided to erect a ne
in the vicinity of Richhill for the pur
scutching flax.

Ripon.—The L.G.B. held a public inq
Ripon recently in connection with the
tion of the City Council for sanction to
£900 for the purposes of their gas underta

Rosyth.—Dunfermline School Board
considered a letter from the Education
ment pointing out that it was proposed
a Roman Catholic school at Rosyth
accommodation of 250 pupils. The Board
no objection.

Ruislip-Northwood.—The U.D.C. has a
a plan for a house in Ickenham-road, for
Bush, submitted by Mr. A. J. Soutar.

St. Helens.—Plans passed by the T.C.:
garage in Henry-street, for the St. Hel
operative Society; additional rooms at
Mount, West Park-road, for Messrs. Pil
Bros., Ltd.; addition to Boys' Home, Rav
Ravenhead-road, for Messrs. Pilkington
Ltd.; motor shed, Bishop-road, for Mr.
Peet.

Selby.—The U.D.C has resolved that,
to the sanction of the L.G.B., tenders
erection of thirty houses on the south
Flaxley-road and of thirty-one houses o
Common be accepted.

Southend.—The T.C. has approved the
ing plans:—Conversion of house into
Hillside-crescent, Mr. D. W. Wayland;
low, Pavilion-drive, Mr. D. W. Kempen
and shed, Pall Mall, Leigh, Mr. R.
additions to two houses, Theobalds-road,
Smith; one bungalow, Silversea-drive,
Posgate; one house, Leigh Hall-road,
Bridge.

Stalybridge.—The Highways Committ
approved plans for a motor shed propose
erected at the rear of house in Stamfor
by Messrs. James Ridyard & Sons; rebuil
Quarry-street Mill by Messrs. Robert Plat
one story extension on south side an
water-closets in connection with prem
Huddersfield-road belonging to the Albi
Company, Ltd.; and rope race for electr
at Copley Mill belonging to Messrs.
Buckley & Sons, Ltd.

Swindon.—Plans passed by the T.C
Building and Public Works Constructio
pany, Ltd., rebuilding house, 57, Coun
Mr. J. Cooper, additions to premises i
London.

Weston-super-Mare.—The D.C. has
instructions for the preparation of the n
plans and estimates for the removal
chamber of the Milton Sewage Pumping
to the Council's property on the other
the road.

Windsor.—Plans passed by the T.C
Messrs. Nevile Read & Co., for alteratio
Hunter, for addition to Nos. 37 and 39
street.

Wrexham.—Mr. George L. Pepler,
L.G.B. Inspector, recently conducted an
relative to the Wrexham R.D.C.'s ap
under Part 2 of the Housing, Town P
etc., Act, 1909, for authority to prepare
planning scheme with reference to t
known as No. 3, comprising the town
Llay.

ARCHITECTURE OF
NDERS AND NORTH-
TERN FRANCE.*

F treating of the particular phase of
ure that is our subject, I wish to say
ords on the art generally; and, to
e with, we had better get a clear idea
we mean by architecture.
ke an illustration:—You may build
so as to be convenient, comfortable,
tantial: but these excellent qualities
ough to make it a work of architecture.
g more is required. What is it?
ft-quoted authority, the man in the
ould answer—ornament. He would
e usual architectural features with a
nd, playfully pepper the façade with
apply columns and carving *ad libitum*
nauseam, and, finally, flatter himself
had achieved greatness. But there
things in the art than are dreamed of
philosophy. The something wanted
btle to be discerned by his partially
understanding. It is the brain-
at shall shape the outline of our
building, proportion the parts, and
se the materials so as to obtain a good
sing effect by those means alone.
btained that effect, ornament can be
he purse permits; it is an accessory,
sirable accessory, certainly, in many

ecessary to emphasise this, as some of
al public think an architect is only
when an ornate building is desired.
t was the late Sir Henry Cole who
that when a Government building
e erected, an officer of the Royal
should get out a plan and outline
and then an architect should be called
borate and ornament it. He would
reduce the architect to the plane
rhanger and deprive him of his proper
f guide, philosopher, and friend to all
to build.
le-duc wrote:—"A perfume of art
from the least pretentious Greek
as well as from the most magnificent
nd the small houses of Pompeii, built
d brick, are as much works of art as
buildings of that city."
e say good effect, suitable effect is,
. implied. The design of the new
f the Regent-street Quadrant is a
ample of good features being used
an unsuitable effect. For the head-
of Mr. Sandow or the War Office it
admirable, because it is expressive
al strength; but for a row of shops,
first requisite is plenty of glass, it
nsuitable.
hitecture, of course, is based on
ion; and in the best examples the
ral detail emphasises and expresses
ruction. There are only two types
uction, lintol and arched. It is
hat the former can only be used
e stones are available. Where only
ones or bricks are to be had,
st be used. Greek architecture is
tol. The Romans used the arch as
he lintol, and their successors, the
ue architects, used the arch exclu-
e round arch, of course, the pointed
being used in Western Europe until
s being developed. It soon became
on account of the much greater ease
h a church could be vaulted when
rches were used instead of round.
he beginning of the sixteenth century
gs in every country were designed
revailing style of the period, and
re was a living progressive art.
great revival of the Renaissance
, which has been followed by number-
r ones.
h a great deal of most beautiful
re has been designed since the
ce it may be said, in a sense, to
the fall of architecture. Up to then
worked in their own style, and their
was so firm that they had no desire to change. They were not, like moderns, "blown about by every wind of doctrine," and always seeking "some new thing." Architects have now eaten of the tree of knowledge of good and evil, are surfeited by the information gained from travel and books, and have been unable to settle down for long to any particular phase. They work for a few years in one style, and just as they are getting used to it, suddenly go off to something quite different. A few years back a quiet type of English Renaissance was being used with great success. It looked as if the tradition broken by the Gothic revival might be picked up, when a sudden swing of the pendulum occurred and the so-called French Greek was introduced.

These frequent changes are detrimental to the art, and true progress cannot be made until there is more continuity of policy.

A number of lantern slides of Reims, Amiens, Laon, Soissons, and Chartres Cathedrals, and of the Town Halls of Bruges, Ypres, etc., and other buildings were shown and described.

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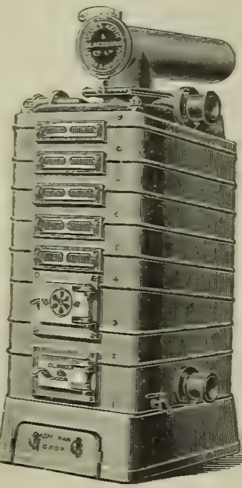
extracts from a paper read before the
ssociation by Mr. W. J. H. Leverton,
B.I.B.A.

TRADE CATALOGUE.

We have received from James Keith & Blackman Company, Ltd., engineers and manufacturers of volume and pressure fans, the "Keith" light and heating apparatus, etc., of No. 27, Farringdon-avenue, E.C., a useful and well-arranged catalogue describing their improved sectional "Challenge" boiler for water heating. Invented nearly forty years ago, when in this country central heating was in its infancy, it was put on the market, as its name implies, as a challenge to the wrought-iron saddle boilers then in use. The "Challenge" boilers are constructed of cast-iron sections placed one upon the other, the joints being accurately machine-faced. The boilers stand complete in themselves, no brickwork being required; the largest size can be erected in a few hours. There is no internal flue action. The bulk of the heating surface being directly over the fire, the heat is utilised to the best advantage. The construction of the fire-box allows a very deep fire to be used, thus minimising the amount of attention required and materially reducing the fuel consumption. The small amount of floor space occupied renders it possible to instal a battery of the largest "Challenge" boilers in a narrow room or passage-way. The internal circulation of the boiler is particularly rapid, each corner giving free vertical circulation; the hottest water thus gets quickly away and rapidly returns from the mains, at the same time preventing unequal expansion and contraction. All parts of the boilers are accessible for examination and cleaning out of soot or dust from heating surfaces. These boilers are extensively employed for heating water for general use in hotels and institutions, and, under most trying conditions, for public baths and some of the best known Turkish bath establishments. When required for hot water supply for domestic purposes, public baths, wash-houses, laundries, etc., special cleaning-doors and corner cleaning plugs are fitted, giving access to all waterways for cleaning.



NEW COMPANIES.

The undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

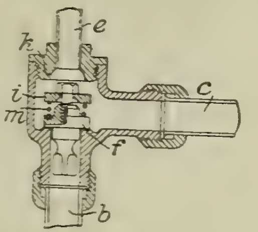
National Wolfram Corporation, Ltd. (143,368). Registered April 11. To purchase, take on lease, etc., mining properties, mines, mining rights, ores, minerals, etc., in Great Britain and elsewhere, and turn same to account, and carry on business of quarrymen, stone merchants, timber merchants, manufacturers of goods of every kind. Nominal capital, £1,000 in 1,000 £1 shares.

Barrett, Bass & Co., Ltd. (143,601). Registered April 14. To carry on business of builders and general contractors, builders' merchants, property repairers and jobbers, painters, glaziers, electrical, mechanical, gas, sanitary, hot water and general engineers, metal workers, paviors, brick and tile manufacturers, cement merchants, dealers in every kind of natural and artificial fuel, land, house and estate agents, auctioneers, etc. Nominal capital, £200 in 200 £1 shares.

SELECTED PATENTS.

21,225 of 1914.—Frederick John Mallett and Charles Alfred Palmer: Water supply; valves.

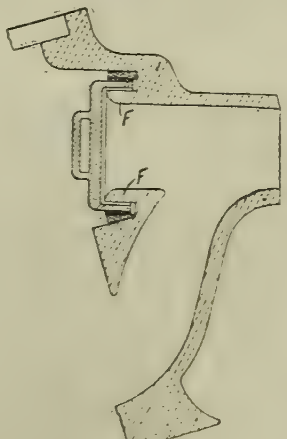
This relates to a combined air inlet or non-return valve for the prevention of contamination of domestic water supply at the outlets or tap nozzles by siphonic action, comprising a lift valve *f* which opens with the water pressure, allowing water to pass from the inlet *b* to the outlet *c*, combined with a co-axial valve *i* which closes the air vent inlet *e*. The valve combination closes normally when the water supply is cut off or fails, thereby preventing the passing back of any fluid from the outlet *c*. In the event, however, of the valve *f* sticking or otherwise failing to close and of siphonic action being set up, the upper valve *i* is forced away from its seating *k* by atmospheric pressure against the action of the spring *m*, so that the supply pipe is vented and the siphonic action is broken.



21,225 of 1914.

22,211 of 1914.—Frank Jones: Drains.

This relates to closures in which a flanged cap bears upon an annular seating, and consists in the provision of an internal collar F to protect the seating during the use of a cleaning-tool.



22,211 of 1914.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (✱) ar advertised in this number:** Competitions, —; Contracts, —; Public Appointments, —; Auction Sales, xviii. Certa conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bi themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be ma for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willi to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while eve endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

APRIL 29. — **Gorey.** — REPAIRS. — For sundry works and repairs at their cottage property at Tinteskin for the D.C. Particulars from Mr. R. Creighton, Clerk of the Council, Gorey.

APRIL 29.—**Liverpool.**—CLEANING AND PAINTING.—The Directors of the Liverpool Overhead Railway invite tenders for the cleaning and painting of about 2,000 yds. of railway viaduct. Particulars of the Engineer, 31, James-street, Liverpool.

MAY 1. — **Burton-on-Trent.**—REGLAZING.—For reglazing a portion of the Market Hall roof, for the Corporation. Specification, etc., of Mr. George T. Lynam, Borough Engineer and Surveyor, Town Hall.

MAY 1. — **Nairn.**—BRIDGES.—For alternative schemes in masonry and reinforced concrete for a new bridge over the Cawdor Burn at Cawdor, and for a new bridge in reinforced concrete over the Muckle Burn at Fornighty, together with improvements to the approach roads. Drawings, etc., may be seen with Mr. H. T. Donaldson, County Clerk, Nairn, as well as with Messrs. Walker & Duncan, civil engineers, 3, Golden-square, Aberdeen.

MAY 1.—**Salford.**—SUB-STATION.—For the erection of a sub-station building in Blackfriars-road, Salford, for the Electricity Department. Particulars from the Borough Electrical Engineer, Electricity Works, Frederick-road, Salford.

MAY 1.—**Selby.**—PAINTING.—For the painting of the outside of the sexton's lodge, out-offices, palisades, notice boards, and seats in the cemetery for the U.D.C. Specification may be seen at 1, Abbey-place, Selby.

MAY 2.—**Bradford.**—PLUMBING.—The Bradford Corporation invite tenders for plumbers' work required in the erection of sanatorium buildings at Grassington. General conditions of contract, etc., of the City Architect, Town Hall, Bradford.

MAY 4.—**Langley Moor.**—CEMETERY EXTENSIONS.—For the construction of boundary walls, iron railing, drainage, and road-making in connection with Waterhouses Cemetery, for the Brandon and Byshottles U.D.C. Particulars of Mr. Geo. G. Donkin, Surveyor, Langley Moor.

MAY 5. — **Dundee.** — STORE.—For the joiner, plumber, plaster, patent glazing, and slater work required in the erection of store at Dudhope Crescent-road, Dundee, for the Corporation. Form of tender, etc., of Mr. H. Richardson, M.Inst.E.E., General Manager and Engineer, Electricity Department.

MAY 6.—**Bolton.**—DECORATING.—For beautifying the following schools:—All Saints' Infants', Christ Church, Deane Mixed, Darcy Lever Wesleyan, Markland-hill, Ridgway's Endowed, Fold, St. Edmund's, St. John's (Folds-road), St. Paul's, Halliwell, St. Thomas's, Halliwell, for the E.C. Specifications of Mr. Frederick Wilkinson, Director of Education, Education Offices, Nelson-square, Bolton.

MAY 6.—**Cork.**—PAINTING.—The County of Cork Joint Hospital Board invite tenders for the painting of the sanatorium at Streamhill, near Doneraile. Tender forms from Mr. R. Evans, C.E., 53, South Mall, Cork, or Mr. E. J. Murphy, Secretary, Courthouse, Cork. Deposit, 10s.

MAY 16. — **Brighton.** — PAINTING, ETC. — For painting, distempering, and tarring the external parts of the Warren Farm Schools, farm buildings, cottages, etc., for the Guardians. Specification, etc., of Mr. Horace Burfield, Clerk to the Guardians, Parochial Offices, Brighton.

NO DATE.—**Grimsby.**—PAINTING.—For painting the exterior of the Strand properties. Messrs. Mitchell & Son, 120, Cleethorpe-road, Grimsby.

FURNITURE, MATERIALS, etc.

APRIL 29.—**Glasgow.**—MATERIALS.—Supply to the Corporation Hospitals Department of plumber, engineer, and joiner materials. Forms of specifications from the House Steward at the Hospital, Belvidere, London-road.

APRIL 29.—**Glasgow.**—MATERIALS.—Supply to the Corporation of builders' materials for six or twelve months from June 1 next. Specifications, etc., of Mr. James Whitton, Superintendent of Parks, City-chambers, 249, George-street.

MAY 2.—**Glasgow.**—STAINED PANES, ETC.—Supply to the Corporation Lighting Department for one year of stained panes, ladders, iron pillars, stones for pillars, iron gas fittings, paints and oils. Specifications, etc., at the office of the Lighting Department, 20, Trongate.

MAY 9.—**Richmond (Surrey).**—LIME.—Supply to the Richmond Main Sewerage Board during the year ending May 31, 1917, of lime. Specifications, etc., of Mr. William Farley, M.Inst.C.E., Engineer to the Board, West Hall-road, Kew Gardens.

NO DATE. — **Rhondda Valley.**—MATERIALS.—The Ton Industrial Co-operative Society, Ltd., invite prices for the supply of building stones, bricks, lime, cement, timber, slates, and all other building materials necessary for the erection of new business premises, stables, etc., at Cwmparc, Rhondda Valley. Estimates to be sent to Mr. W. D. Morgan, M.S.A., architect, 194, Ystrad-road, Pentre, Glam.

ENGINEERING, IRON, AND STEEL.

MAY 3. — **Blackburn.** — RADIATORS. — The Guardians of the Manchester Union invite tenders for the supply of radiators to the Epileptic Colony, Langho, near Blackburn. Particulars from Mr. James Macdonald, Clerk to the Guardians, Union Offices, All Saints', Manchester.

MAY 3.—**Lewisham.**—DRYING PLATES, ETC.—Supply to the B.C. at the Molesworth-street Depôt, Lewisham, of about ten tons of cast-iron drying plates, dampers, and furnace bars, and about 1¼ tons of galvanised iron sheets. Contract and drawing may be seen and copies of the form of tender, etc., obtained at the Town Hall, Catford (Surveyor's Department).

MAY 8.—**Salford.**—STEAM PIPES, ETC.—For high-pressure steel steam pipes and separator; also for cast-iron pipes and valves, for the Electricity Department. Specifications, etc., from the Borough Electrical Engineer, Electricity Works, Frederick-road, Salford.

ROAD, SANITARY, AND WATER WORKS.

APRIL 28.—**Emley.**—MATERIALS.—Supply to the U.D.C. of road materials. Mr. S. Gill, Surveyor, Emley, Wakefield.

APRIL 29. — **Helen's Bay.** — SEWERAG carrying out the sewerage scheme at Bay for the Newtownards R.D.C. Pla pared by Mr. W. W. K. Wheeler, C.E.

MAY 1.—**Rothesay.**—TAR.—Supply to t Committee of the T.C. of refined ta Robert D. Whyte, Town Clerk, Rothesa

MAY 2.—**Portslade-by-Sea.**—FLINTS.— to the U.D.C. of screened Coombe rock Forms of tender of the Council's Survey A. Taylor Allen, Council Offices, Ports Sea.

MAY 3.—**Braintree.**—GRANITE.—Supply U.D.C. of broken granite. Forms of te Mr. H. H. Nankivell, Surveyor, Vestr Braintree.

MAY 4.—**Brandon and Byshottles.**—Bo WALLS, ETC.—For the construction of b walls, iron railing, drainage, and road in connection with the Waterhouses Ce Particulars from Mr. Geo. G. Donkin, Su Langley Moor.

MAY 5.—**London.**—DRAINAGE.—For certa land drainage at Tottenham Cemetery Tottenham and Wood Green Burial Form of contract, etc., of the archite J. C. S. Mummery, 13, Fitzroy-square,

MAY 9.—**Horncastle.**—MATERIAL.—Sup the U.D.C. of road material. Forms of from Mr. R. W. Clitherow, Clerk to the Court House, Horncastle.

Auction Sale.

✱ MAY 16. — **Hampstead Heath.** — Hampton & Sons will sell by auction, Mart, freehold building estate.

TO CORRESPONDENTS.

NOTE.—All communications with respect t and artistic matters should be addressed t EDITOR" (and not to any person by name relating to advertisements and other exclusively matters should be addressed to THE BUILDE and *not* to the Editor.

All communications must be authenticate name and address of the sender, whether for pu or not. No notice can be taken of an communications.

The responsibility of signed articles, lett papers read at meetings rests, of course, with the

We cannot undertake to return rejected co tions; and the Editor cannot be responsible for photographs, manuscripts, or other document models or samples sent to or left at this offi he has specially asked for them.

All drawings sent to or left at this office for c tion should bear the owner's name and ad either the face or back of the drawing. D inconvenience may result from inattention to

Any commission to a contributor to write a or to execute or lend a drawing for publication subject to the approval of the article or draw received, by the Editor, who retains the right it if unsatisfactory. The receipt by the au proof of an article in type does not necessarily acceptance.

N.B.—Illustrations of the First Premiated any important architectural competition will accepted for publication by the Editor, whe have been formally asked for or not.

[Those with an asterisk (*) are advertised in this issue.]

ES CURRENT OF MATERIALS.

g to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

*our last issue white lead has advanced and several rices increased.—*Ed.

r aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest st. Quality and quantity obviously affect prices t which should be remembered by those who se of this information.

BRICKS, &c.

1,000 Alongside, in River Thames.	£ s. d.
ocks	2 0 0
Stocks for Facings	2 12 0

1,000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
s ……	1 10 0	Best Blue Pressed Staffordshire ..	5 0 0
areham ……..	3 12 0	Do. Bullnose ..	5 5 0
ed Pressed on Facing	5 5 0	Best Stourbridge Fire Bricks ..	4 15 0

Bricks—

White,		D'ble Str'tch'rs	18 17 6
, and		Double Headers	15 17 6
Glazed chers ..	13 7 6	One Side and two Ends ….	19 17 6
s ……	12 17 6	Two Sides and one End ….	20 17 6
Bullnose 4½ in. ……	16 17 6	Splays and Squints ….	18 7 6

econd Quality £1 per 1,000 less than best.

	s. d.	
Ballast ……..	8 3	per yard, delivered.
and Pit Sand ….	8 6	„ „ „
ashed Sand ……	9 6	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
rtland Cement ……..	2 5 0	..	2 8 0

2 1s. alongside in 80-ton lots.
ete 2s. 6d. per ton extra on above.
ound Blue Lias Lime…. 1 5 6 at rly. depôt.
-The cement or lime is exclusive of the ordinary charge for sacks.
one Lime ……… 18s. 0d. per yard delivered.
idge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
Stone — delivered in railway trucks at bourne Park, Paddington, G.W.R., or Lambeth, G.W.R., per ft. cube ……..	1 7
delivered in railway trucks at Nine , L. & S.W.R., per ft. cube…………	1 8¾
delivered on road waggons at Nine Elms t …………………………	1 9¼

nd Stone—

n Whitbed, in random blocks of 20 ft. rage, delivered in railway trucks at stbourne Park, G.W.R., South Lambeth, W.R., or Nine Elms, or L. & S.W.R. per ft. be ………………………	2 5½
lo. delivered on road waggons at Pimlico arf or Nine Elms Depôt, per ft. cube ..	2 6½

e Basebed, 2d. per ft. cube extra.

Blocks—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
r in blocks ..	2 0	Closeburn Red Freestone ……	2 2
blocks ….	1 7¼		
l in blocks	2 4	Red and White Mansfield Random block	2 9
Dale in s ……..	2 5	Yellow Magnesian Limestone do. do.	3 3

Stone—*Robin Hood Quality.*

Ft. Cube, Delivered at Railway Depôt.	s. d.
d random blocks …………………….	3 4

Per Ft. Super., Delivered at Railway Depôt.

	s. d.
awn two sides landings to sizes (under super.) ………………………	2 5
bbed two sides ditto, ditto …………	2 8
wn two sides slabs (random sizes) ……	1 0½
2½ in. sawn one side slabs (random sizes) ..	0 8¼
2 in. ditto, ditto …………………	0 6¾

York—

Per Ft. Cube, Delivered at Railway Depôt.

	s. d.
d random blocks …………………	3 0

er Ft. Super, Delivered at Railway Depôt.

	s. d.
wn two sides landing to sizes (under 40 ft. .) ………………………	2 3
bbed two sides ditto ………………	2 7
wn two sides slabs (random sizes) ……	1 0
f-faced random flags ………………	0 5

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
achine-made tiles or hand-made sand- tiles from either Broseley or ordshire district ………………	2 12 6
ental ditto ………………………	2 15 0
l valley tiles (per dozen) …………	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

		£ s. d.
ue Bangor slates,	20 by 10 …………	11 16 0
ality „	„ …………	11 10 0
„	16 by 8 …………	5 15 0
ue Portmadoc,	20 by 10 …………	11 13 6
ality „	„ …………	11 3 6
„	16 by 8 …………	5 15 0

WOOD.

er prices should be confirmed, as the market is *changing daily.*

Building Redwood.

Imported sizes.	Per standard. £ s. d.		£ s. d.
4 in. by 12 in., 4 in. 11 in., 3 in. by 11 in., in. by 9 in., and 2 in. 11 in. …………	33 10 0	..	34 10 0

WOOD (*Continued*).

Best Building Redwood. Per standard.

	£ s. d.		£ s. d.
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in. …….	32 10 0	..	33 10 0
Battens: 2 in., 2½ in., and 3 in. by 8 in. …………… 2 in., 2½ in., and 3 in. by 7 in. …………… 2 in., 2½ in., and 3 in. by 6 in. …………… 2 in., 2½ in., and 3 in. by 5 in. …………… Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. …. 3 in. by 4 in., and 3 in. by 4½ in. ……………	31 10 0	..	32 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.	
¾ in. ………………	1 0 0		
Seconds: building quality deals, battens, boards, and scantlings ……..	1 0 0	less than best.	
Best Middling Dantzic and Memel Fir Timber Logs (average specification) ..	Per load of 50 ft. cube. 10 0 0	..	—
Seconds do. do. ….	9 10 0	..	—
9 in. to 10 in. do. ……	8 10 0	..	—
6 in. to 8 in. do. ……	8 0 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average) ……	12 0 0	..	13 10 0
Do. 6 in. to 10 in. ….	10 0 0	..	11 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in. ….	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals ……	34 0 0	..	35 0 0
Under 2 in. thick ……….	0 10 0		extra.

Joiners' Wood.

White Sea Second Quality Red: 4 in. by 11 in………	39 0 0	..	40 0 0
3 in. by 11 in. and 2 in. by 11 in. …………	38 0 0	..	39 0 0
4 in. by 9 in. …………	37 0 0	..	38 0 0
3 in. by 9 in. and 2½ in. by 9 in. …………	36 0 0	..	37 0 0
9 in. by 11 in. boards ….	1 0 0		more than deals.
7 in. and 8 in. battens ….	33 0 0	..	34 0 0
7 in. and 8 in. boards ….	1 0 0		more than battens.
Third quality ……….	2 0 0	less than best.	
Fourth quality ……….	£2 to £3	less than seconds.	
Archangel White Deals—Best 3 in. by 9 in. and 10 in. and 11 in. ……	36 0 0	..	37 0 0
Seconds, do. ……….	2 0 0	less than best.	
U.S. Battens …………	30 0 0	..	32 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 6½ in. planed and shot …………	1 16 0	..	1 19 0
1¼ in. by 6½ in. planed and matched …………	1 16 6	..	1 19 6
1 in. by 6½ in. planed and shot …………	1 9 0	..	1 12 0
1 in. by 6½ in. planed and matched …………	1 9 6	..	1 12 6
¾ in. by 6½ in. planed, matched and beaded, or V jointed …………	1 4 0	..	1 6 0
1 in. by 6½ in. do. ……	1 10 6	..	1 12 0
⅝ in. by 6½ in. do. ……	1 0 0	..	1 1 0

	Per standard.		
Columbian or Oregon Pine, best quality …………	42 0 0	..	44 0 0
Yellow Pine—First, regular sizes …………	57 0 0		upwards.
Oddments …………	39 0 0		„
Seconds, regular sizes ..	43 10 0		„
Oddments …………	37 10 0		„
Kauri Pine—Planks per ft. cube …………	0 8 0	..	—
Wainscot Oak Logs, per ft. cube …………	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super., as inch ……..	0 1 0	..	0 1 3
¾ in. do. no…	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch …………	0 1 0	..	0 1 4
Selected, Figury, per ft. super., as inch ……..	0 1 6	..	0 2 6
Cuba Mahogany ……..	0 1 6	..	0 2 6
Dry Walnut, American, per super., as inch ……..	0 1 0	..	upwards. 0 1 3
French, "Italian," Walnut ..	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein) …………	28 0 0	..	34 0 0
Do. do. (Java) ……..	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube ……….	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price ……	20 0 0	..	21 0 0
Plain Compound Girders, ordinary Sections ……..	22 0 0	..	23 0 0
Plain Compound Stanchions ..	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections ……..	20 10 0	..	21 10 0
Flitch Plates …………..	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns …………..	13 10 0	..	14 0 0

Turning extra.

METALS (*Continued*).

Iron—	Per ton, in London. £ s. d.		£ s. d.
Common Bars …………	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality ..	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars …………	18 0 0	..	18 10 0

Steel Bars, Ferro-Concrete quality, £18 basis price.

Hoop Iron, basis price ….	19 10 0	..	20 0 0
„ „ Galvanised ….	30 0 0	..	

(*And upwards, according to size and gauge.)

Sheet Iron Black—Ordinary sizes to 20 g. ….	19 10 0	..	20 0 0
„ „ 24 g. ….	20 10 0	..	21 0 0
„ „ 26 g. ….	21 10 0	..	22 0 0
Sheet Iron, Galvanised flat, ordinary quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g. ……..	30 0 0	..	—
Ordinary sizes to 22 g. and 24 g. ………………	30 10 0	..	—
Ordinary sizes to 26 g. ….	33 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—Ordinary sizes to 20 g. ….	31 0 0	..	—
„ „ 22 g. and 24 g. ………………	31 10 0	..	—
Ordinary sizes to 26 g. ….	34 10 0	..	—
Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 8 ft. 20 g. ………………	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 1[illegible] 0	..	—
Ordinary sizes, 26 g. ……	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker ………………	20 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g. ………………	20 15 0	..	—
Best Soft Steel Sheets, 26 g. ..	22 10 0	..	—
Cut Nails, 3 in. to 6 in. ……	21 10 0	..	22 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
Lead—Sheet, English, 4 lb. and up ………………		41 10 0	..	—
Pipe in coils …………		42 0 0	..	—
Soil pipe …………		45 0 0	..	—
Compo pipe …………		45 0 0	..	—

Note—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

Copper—Strong Sheet ……	per lb.	0 1 5	..	—
Thin „ ……..	„	0 1 6	..	—
Copper nails ……	„	0 1 5	..	—
Copper wire ……	„	0 1 5	..	—
Brass—Strong Sheet ……	„	0 1 3	..	—
Thin „ ……..	„	0 1 4	..	—
Tin—English Ingots ..	„	0 2 0	..	—
Solder—Plumbers' ..	„	0 0 11	..	—
Tinmen's ……..	„	0 1 2	..	—
Blowpipe ……..	„	0 1 4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds ……	5¼d.	26 oz. fourths ……	6¼d.
„ fourths ……	4¾d.	32 oz. thirds ……	8¾d.
21 oz. thirds ……	6¼d.	„ fourths ….	7½d.
„ fourths ……	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds ……	7d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

		Per Ft.
⅛	Rolled plate ………………	4d.
3/16	Rough rolled and rough cast plate ……	4¼d.
¼	Rough rolled and rough cast plate ……	4¾d.
	Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white ..	5d.
	Ditto, tinted ………………	6¼d.
	Rolled Sheet ………………	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes ……	per gallon	0 3 5
„ „ „ in barrels ….	„	0 3 6
„ „ „ in drums ….	„	0 3 9
Boiled „ „ in barrels ….	„	0 3 8
„ „ „ in drums ….	„	0 4 0
Turpentine in barrels ………	„	0 4 0
„ in drums ………	„	0 4 3
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		58 0 0
Red Lead, Dry ………………	per ton	56 0 0
Best Linseed Oil Putty ……..	per cwt.	0 11 0
Stockholm Tar ………………	per barrel	1 12 0
Genuine White Lead Paint—"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots ……	per ton delivered	72 0 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish ………………	0 8 0
Pale Copal Oak ………………	0 10 6
Superfine Pale Elastic Oak ………………	0 12 6
Fine Extra Hard Church Oak ………………	0 10 0
Superfine Hard-drying Oak, for seats of Churches ………………	0 14 6
Fine Elastic Carriage ………………	0 12 9
Superfine Pale Elastic Carriage ………………	0 16 0
Fine Pale Maple ………………	0 10 0
Finest Pale Durable Copal ………………	0 18 6
Extra Pale French Oil ………………	1 1 0
Eggshell Flatting Varnish ………………	0 18 0
White Pale Enamel ………………	1 4 0
Extra Pale Paper ………………	0 12 0
Best Japan Gold Size ………………	0 10 0
Best Black Japan ………………	0 16 0
Oak and Mahogany Stain ………………	0 9 0
Brunswick Black ………………	0 8 0
Berlin Black ………………	0 16 0
Knotting ………………	0 10 0
French and Brush Polish ………………	0 10 0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

ADWICK-LE-STREET.—For certain works of surface-water drainage, for the Urban District Council. Mr. G. Gledhill, Surveyor, Council Offices, Adwick-le-Street. Quantities by Surveyor :—

Pullar & Co.	£194	15
H. Drake & Co.	185	0
Swift Bros.	140	0
E. S. Knight, Balby, Doncaster*	138	0

[Surveyor's estimate, £133 15s.]

AUCHTERLESS.—Accepted for additions to dwelling-house, Mains of Hatton, Auchterless, for Mr. Garden A. Duff, Hatton Castle. Mr. W. L. Duncan, architect, Turriff :—

Mains of Hatton.—Mason, P. Christie, jun, Turriff; carpenters, A. & W. Hendry, Wartle; slater, W. J. C. Eddie, Fyvie; plasterer, J. B. Dallas, Turriff; plumbers, C. Duthie & Sons, Turriff. Total, £217 12s.

Addition to Dwelling-house, Lambslack, Auchterless.—Mason, A. Ogston, Fyvie; carpenters, A. & W. Hendry, Wartle; slater, C. Dickie, Turriff; plasterer, J. B. Dallas, Turriff; plumbers, Anderson & Lowe, Turriff. Total, £323.

BEVERLEY.—For erection of a foreman's house and two cottages at the High Eske Farm, near Beverley, for Mrs. Slingsby. Mr. R. H. Whiteing, architect, 3, Ladygate, Beverley. Quantities by Mr. John Watson, Bowalley-lane, Hull :—

G. Pape & Sons	£1,099	18	0
Turner & Sons	1,096	11	2
T. W. Martindale	1,026	9	0
J. Constable, Newbegin, Beverley*	932	14	5

CARDIFF.—For constructing new thoroughfare from St. Mary-street to Westgate-street, for the Corporation. Mr. W. Harpur, M.Inst.C.E., City Engineer :—

M. Parker, jun.	£435	3	8
T. R. Williams	388	15	0
Barnes, Chaplin, & Co.	373	9	7
C. Davies	327	1	0
Lewis Bros., Dinas Powis*	302	8	2

CORK.—For works proposed to be carried out at the nurses' dormitories, for the Committee of Management of the Cork South Infirmary. Mr. J. F. McMullen, M.S.A., architect :—

A. Gaul, Cork*	£239

GUILDFORD.—For erection of a retaining wall for the support of the highway in Quarry-street, Guildford, for the Town Council. Mr. E. Young Harrison, A.M.Inst.C.E., Borough Engineer and Surveyor :—

Reinforced Concrete Wall.

Franks Harris Bros., Station Approach, Guildford*	£674	4	9

LANCASTER.—Accepted for alterations at the confectionery department, Central Buildings, New-street, Lancaster, for the Lancaster and District Co-operative Society, Ltd. Mr. R. Jackson, architect, 32, Market-street, Lancaster :—

Mason: R. Ward, Addcliffe-road	£25	11	0
Joiners: Peill & Riley, Greaves-road	124	15	0
Plumbers: Calvert & Heald, Market-street	82	9	6
Painter: R. Crook, 6A, Brock-street	24	9	0

[All of Lancaster.]

LONDON.—For erecting walling and forming doorways in the basement of C block at their Infirmary, Highgate-hill, for the Guardians of St. Mary, Islington. Mr. E. J. Harrison, architect, 23, Berkeley-road, Crouch End, N. :—

Stevens & Sons	£135	0
T. Mitchell	134	7
Bate Bros.	131	0
H. & E. Lea, Ltd.	125	0
Sprosson & Co.	125	0
Staines & Co.	111	0
W. S. Sharpin	110	0
R. D. Paterson, Ltd.	99	11
L. Town & Co.	97	10
J. E. White & Co.	95	0
Smith & Son	91	0
T. Watson, 92 Hampstead-road, N.W.*	89	0

SHEFFIELD.—For erection of electricity substations, for the Town Council :—

Stanley-Street.

W. Marlow & Sons, Ltd.‡	£1,216

Sidney-Street.

W. Marlow & Sons, Ltd.‡	£1,011

[‡ Recommended for acceptance.]

◆

PATENTS.

APPLICATIONS PUBLISHED.*

3,650 of 1915.—Cuthbert Miller Burnett: Construction of ferro-concrete walls and the like.

4,223 of 1915.—Lyle Oswald Capel: Spanners.

4,224 of 1915.—Philip François Armand Mauroy: System of puttyless glazing.

4,414 of 1915.—Arthur Studer Pla road surface material and process for manufacture of same.

5,289 of 1915.—Ernest Griffiths: Ventilat

5,660 of 1915.—Arthur Richard Banks Albert Bye: Reinforcement of concrete the like.

5,954 of 1915.—Oscar Bauer: Stone-work machines.

6,516 of 1915.—John Howard Cartland Richard Ridgeway Harrison: Stay-faster for opening and closing casement wind hinged doors and the like.

6,628 of 1915.—William Hodge: Rail hopper wagons and the like.

9,220 of 1915.—Henry Edward Fripp: S window and like fastenings.

9,368 of 1915.—Heinrich Baschy (firm Apparatus for cleaning metal walls, tubes, fl and the like.

9,383 of 1915.—George Charles Ver Inkpen: Ventilators for windows and the

9,839 of 1915.—Thomas Daniel Kelly: Pa

9,870 of 1915.—George Wilfrid Naylor John Francis Naylor: Tanks for the purifica of sewage.

9,904 of 1915.—Stephen Shapland Abb Tables and the like.

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

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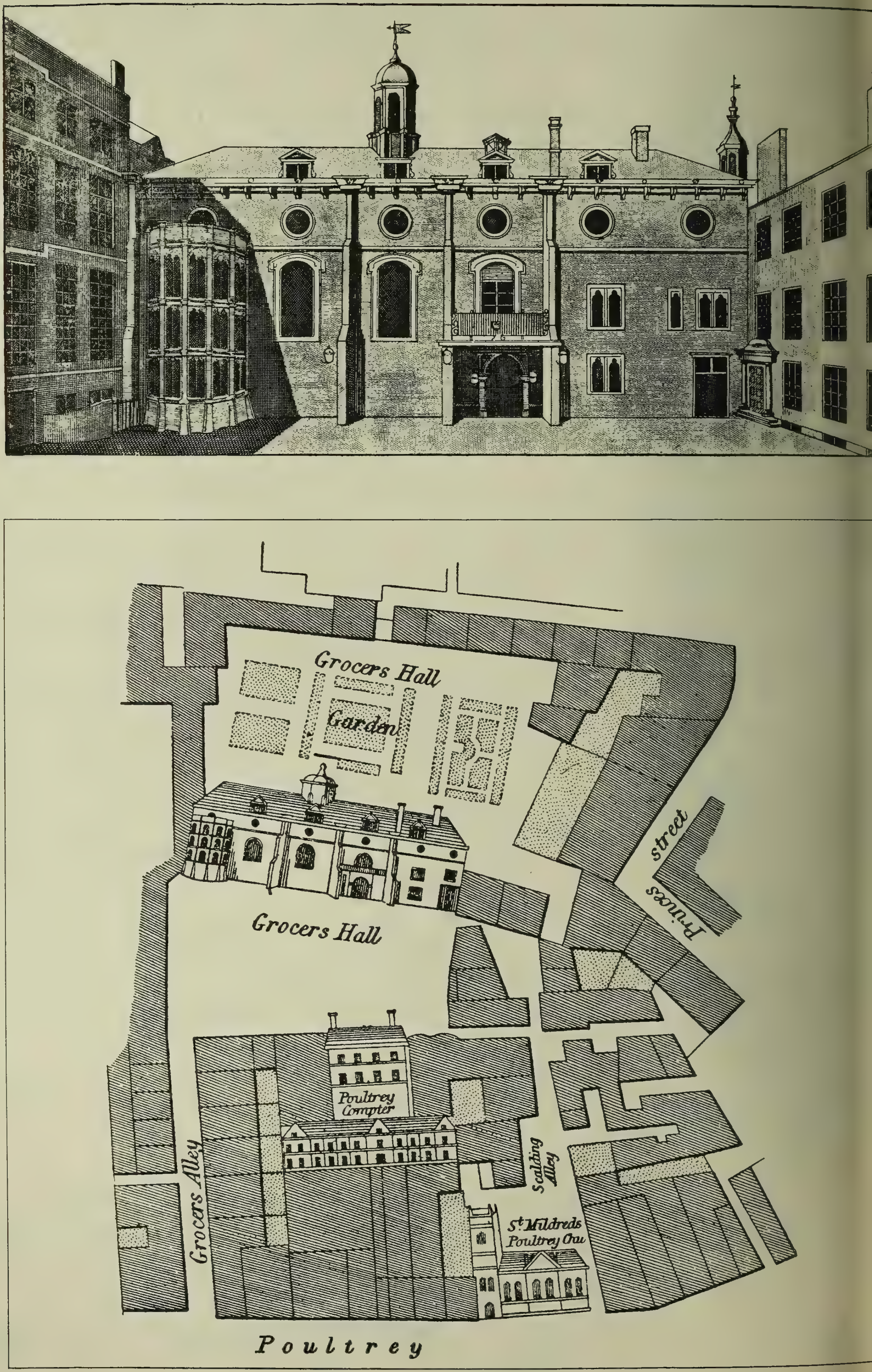
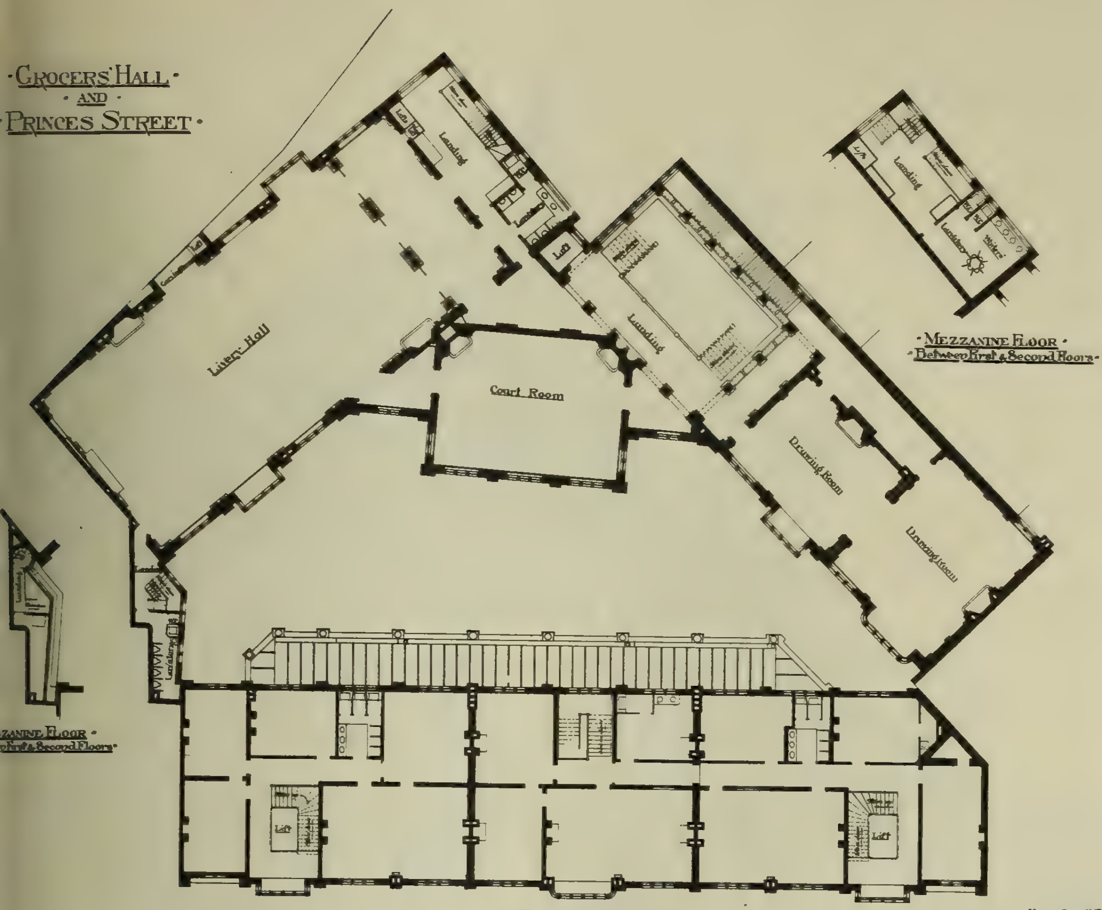


OLD GROCERS' HALL AND SURROUNDING BUILDINGS.

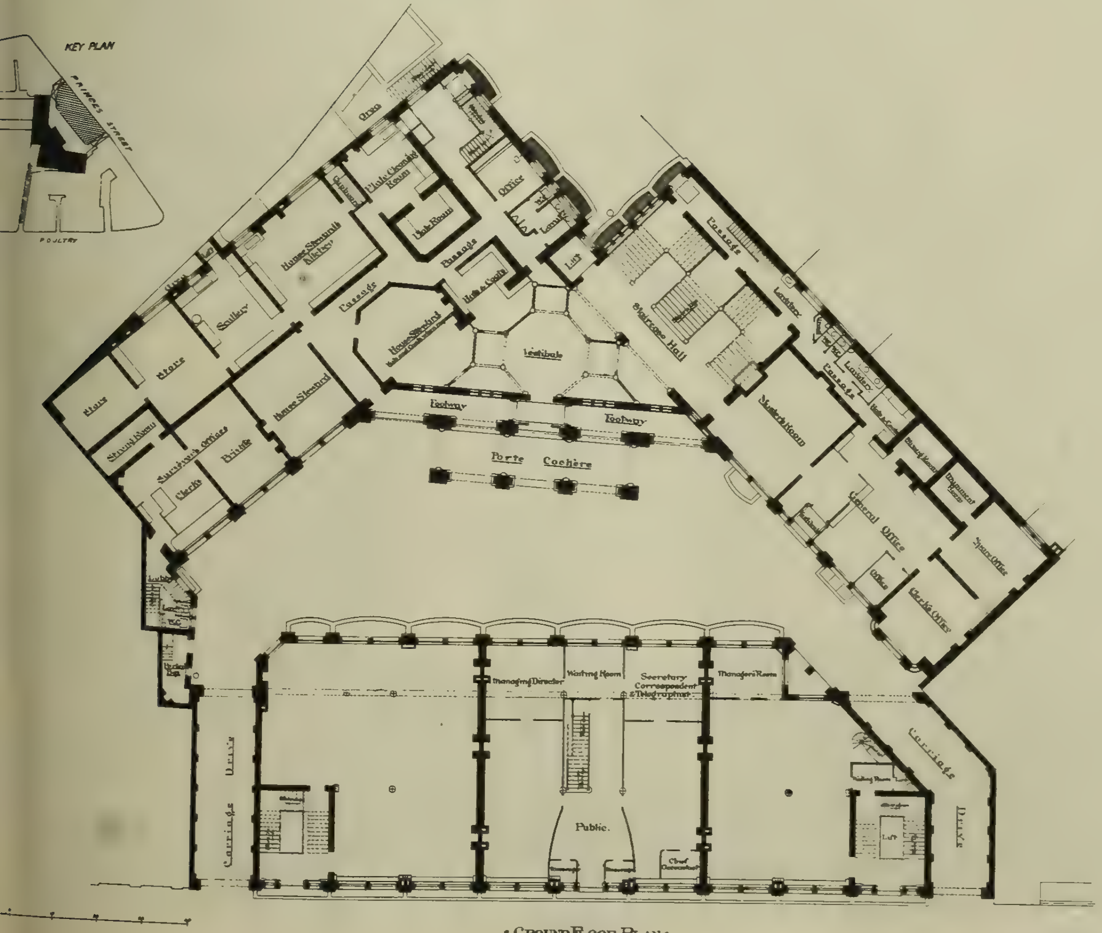
FROM "THE LIVERY COMPANIES OF THE CITY OF LONDON," BY W. C. HAZLITT.

·GROCERS' HALL·
·AND·
·PRINCES STREET·



·FIRST FLOOR PLAN·

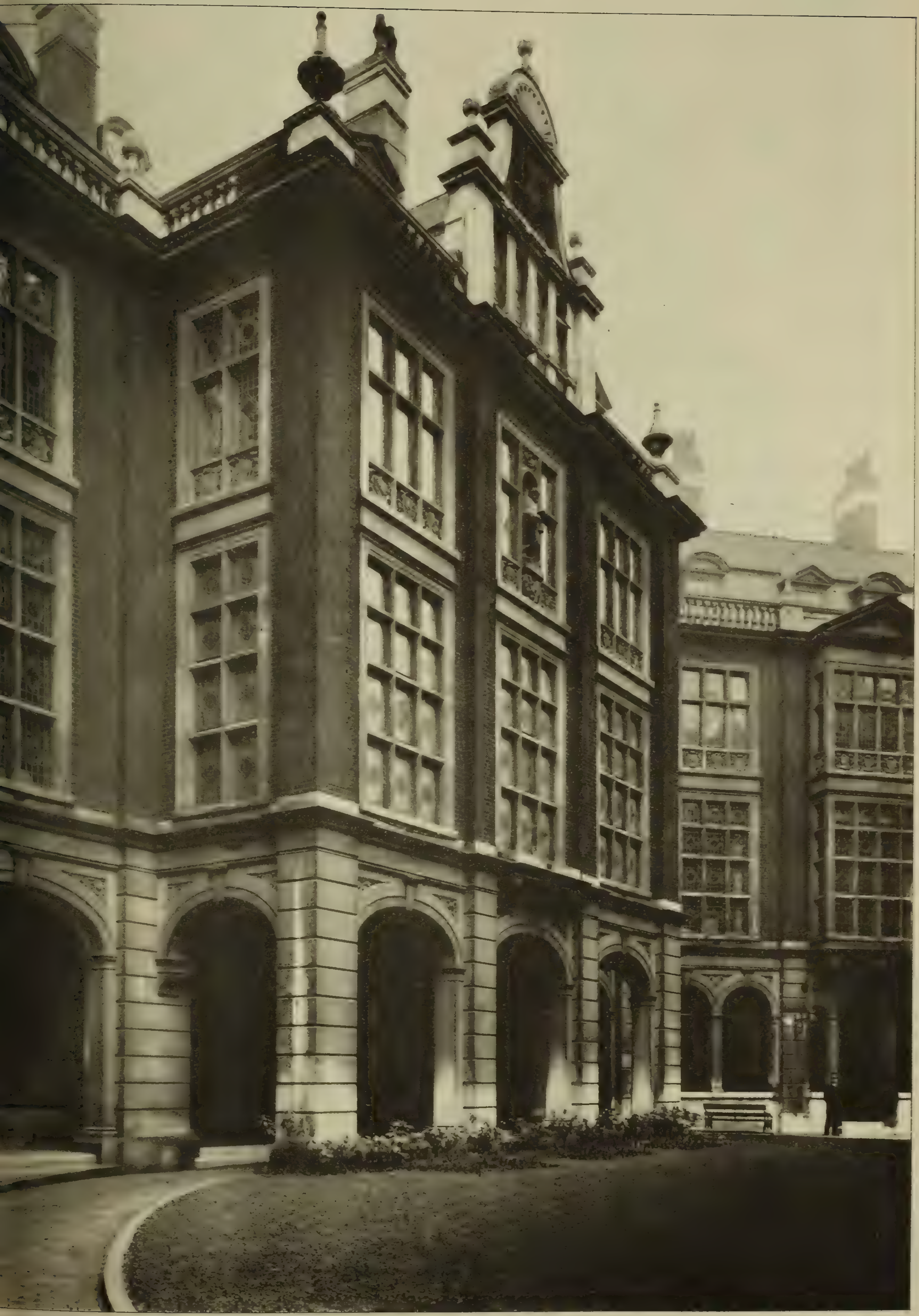
Henry Cowell Boyes, Arch^t
Surveyor's Office, Grocers' Hall
E.C.



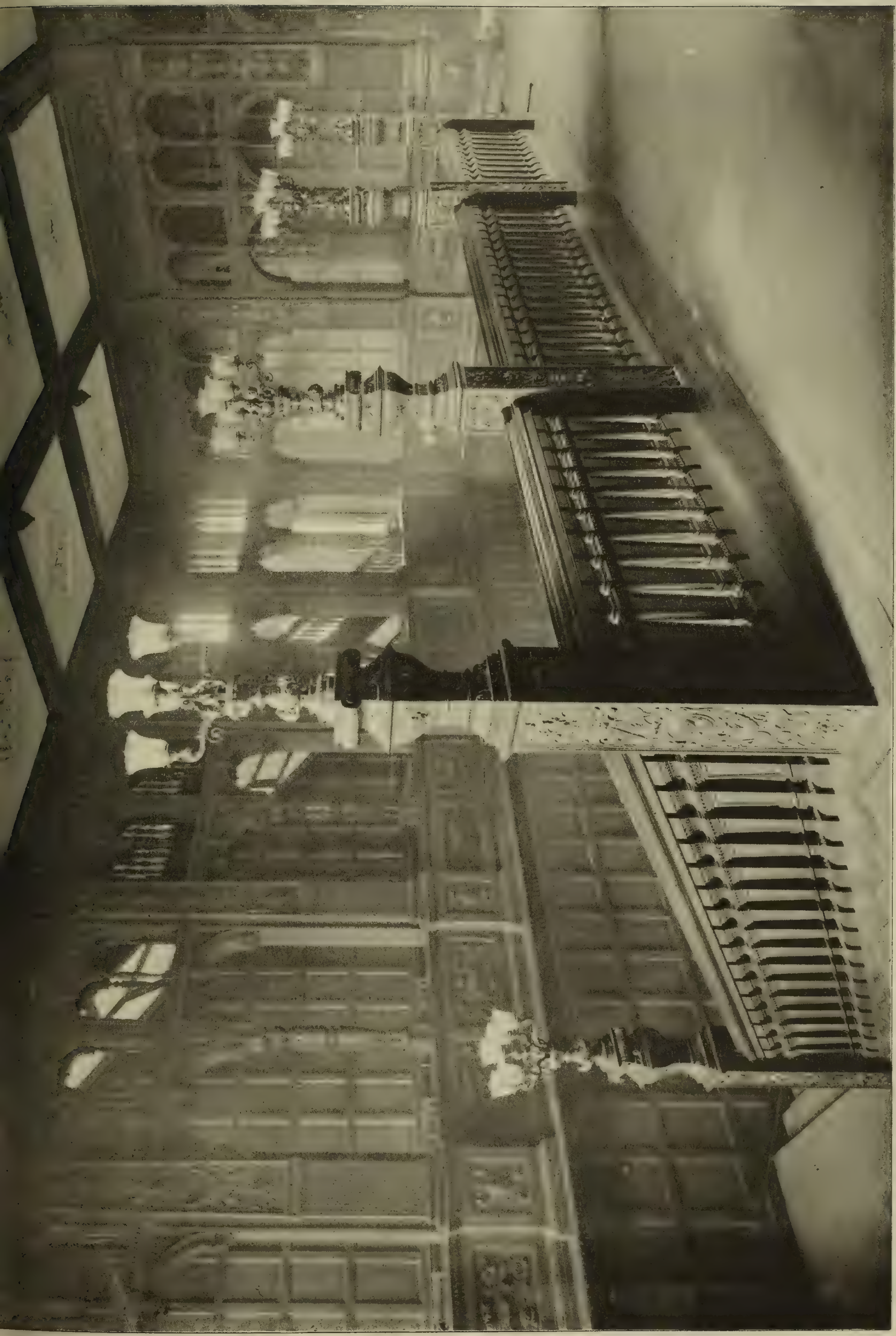
·GROUND FLOOR PLAN·

Henry Cowell Boyes, Arch^t
Surveyor's Office, Grocers' Hall E.C.

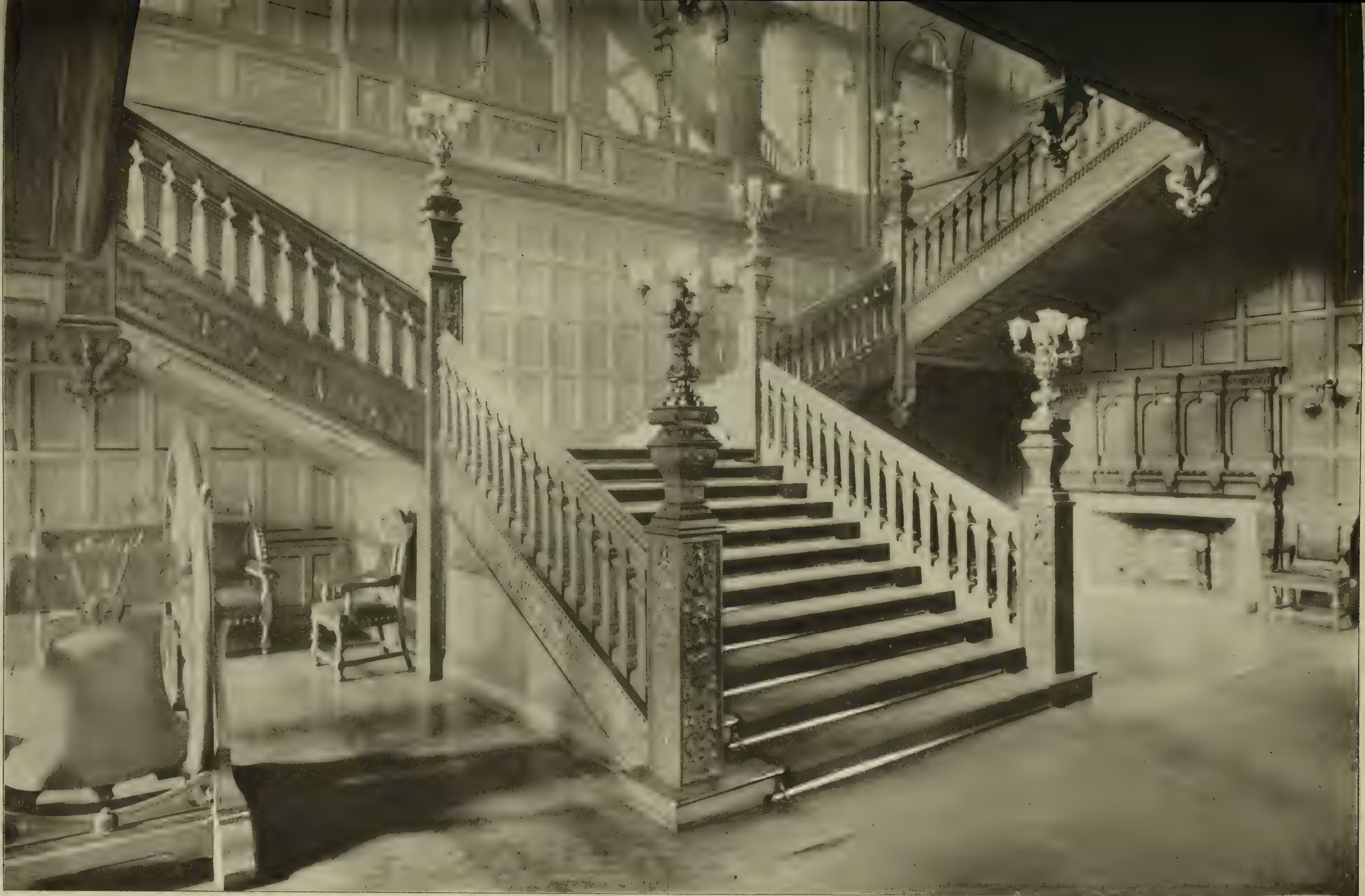
GROCERS' HALL.



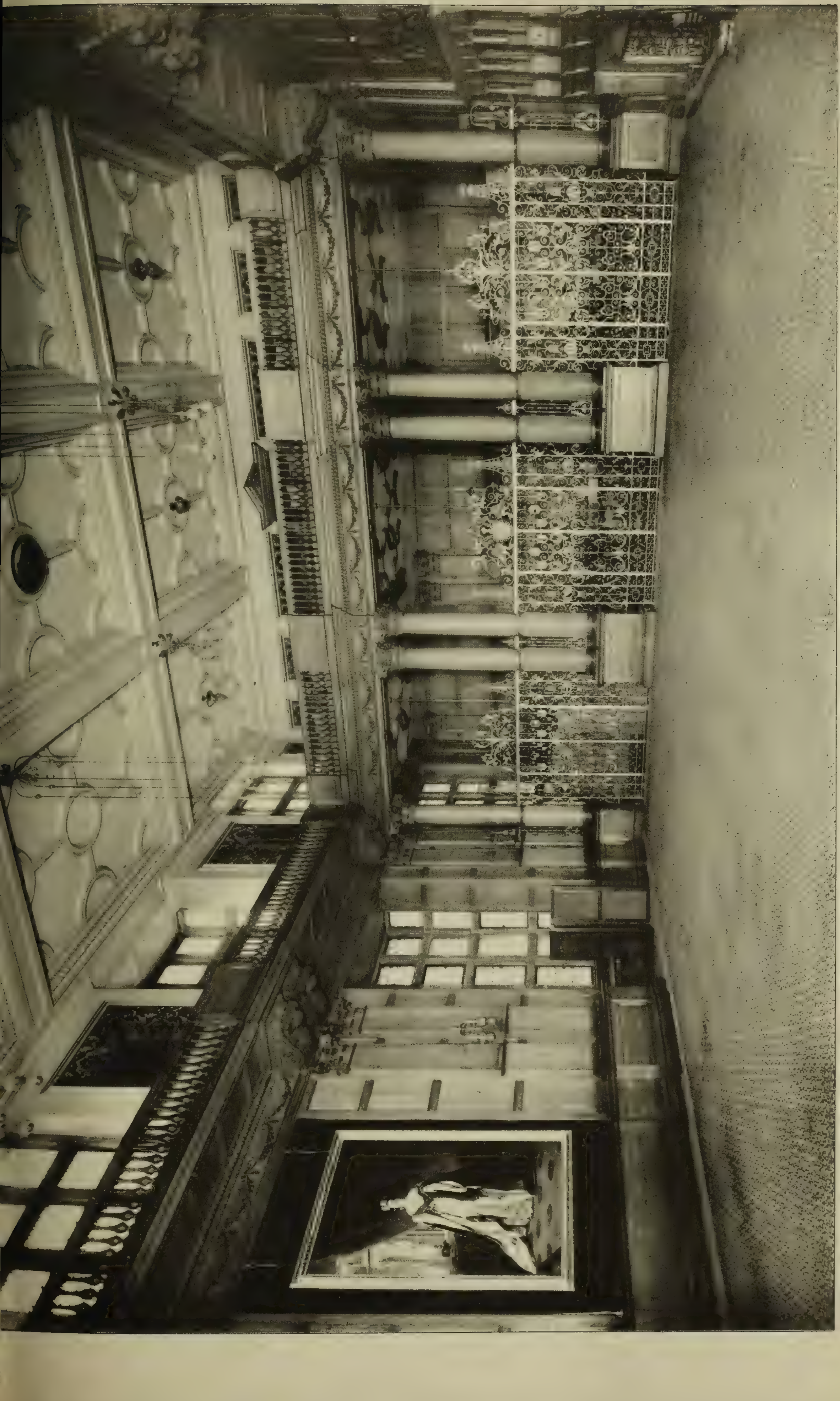
GROCERS' HALL: EXTERNAL VIEW.



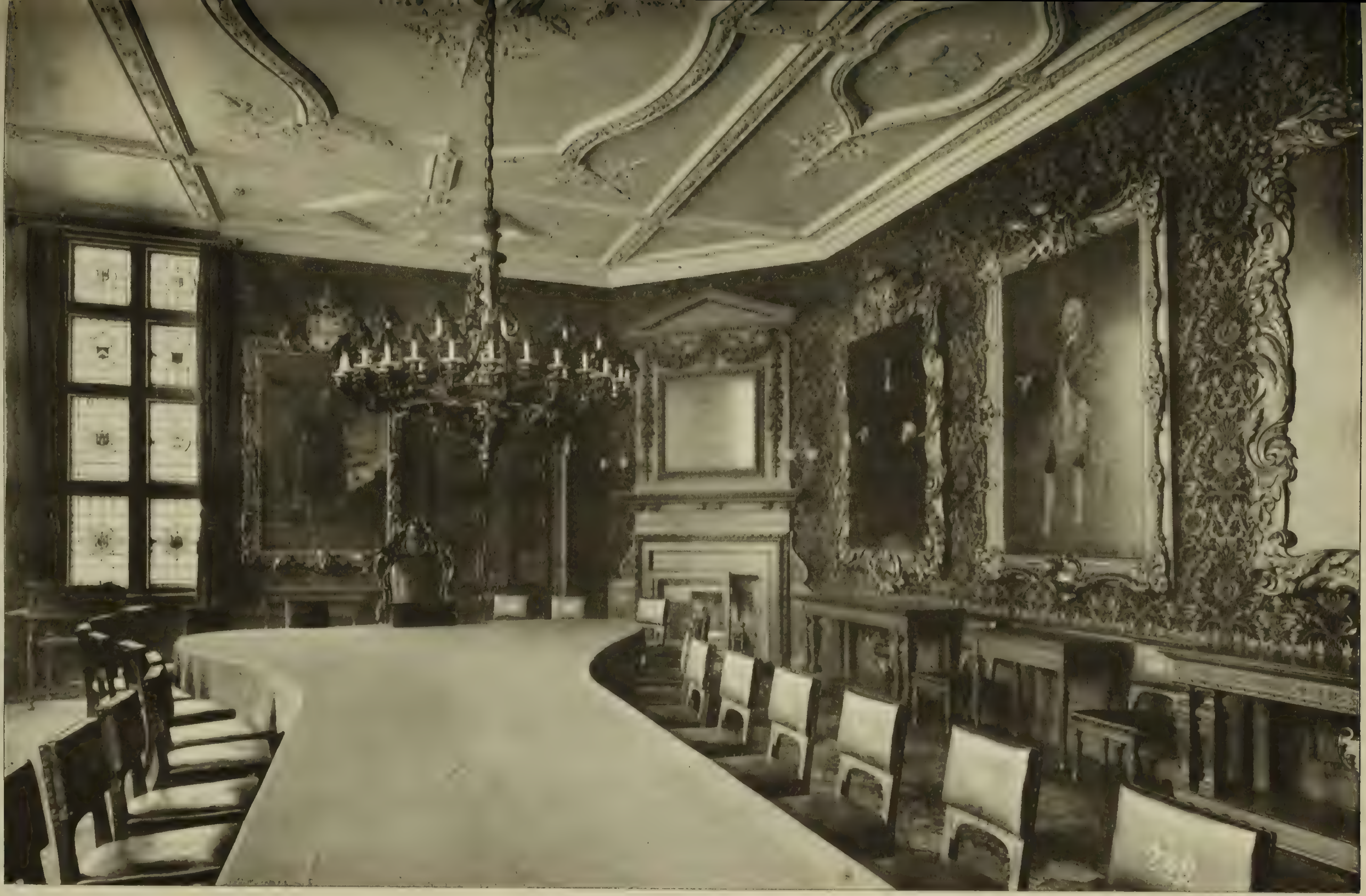
GROCERS' HALL: THE STAIRCASE FROM FIRST FLOOR.



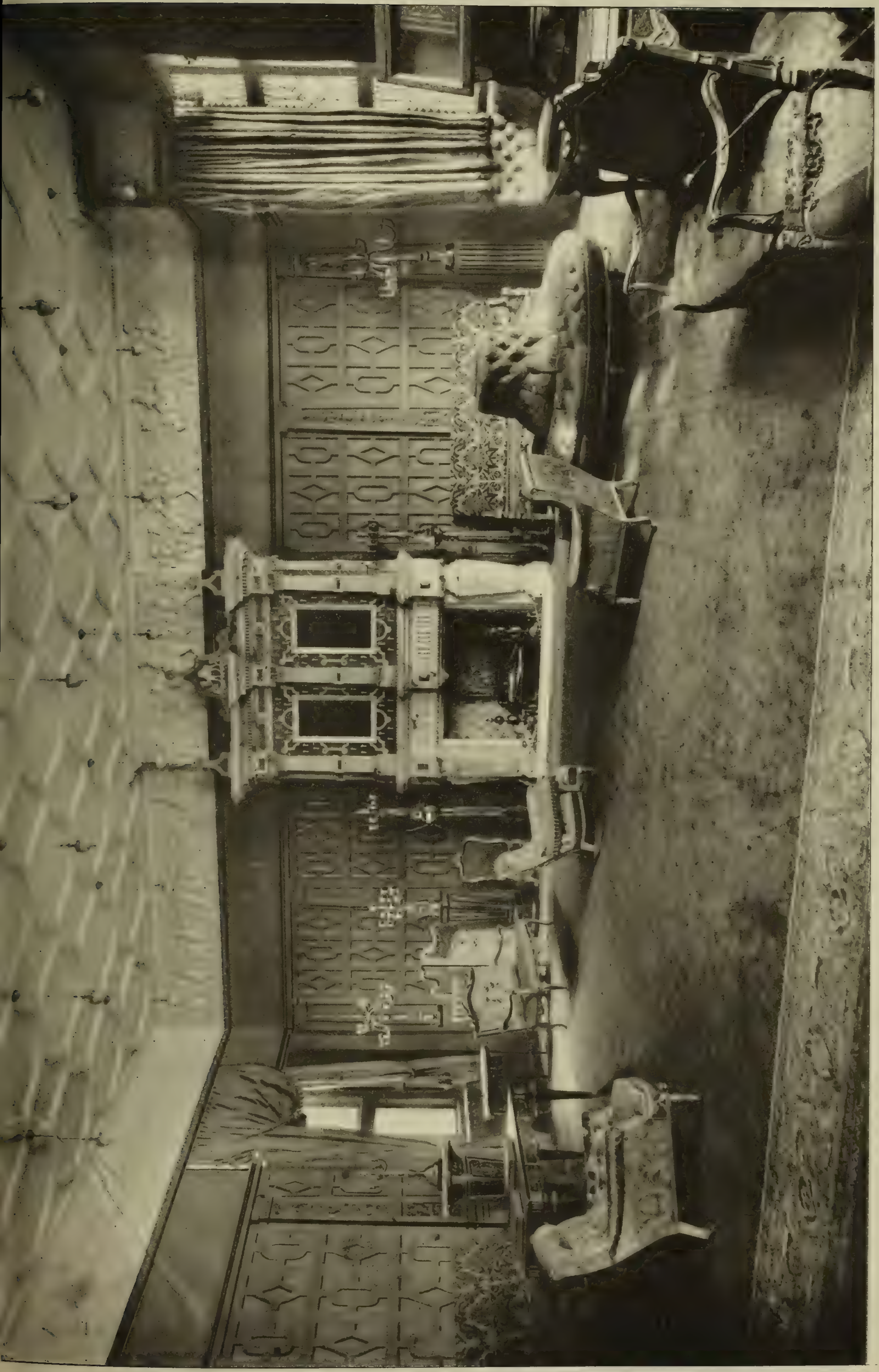
GROCERS HALL: THE STAIRCASE FROM GROUND FLOOR.



GROCERS' HALL: THE LIVERY HALL.



GROCERS' HALL: THE COURT ROOM.



GROCERS' HALL: THE DRAWING ROOM.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

L. CX.—No. 3822. MAY 5, 1916.

ARCHITECTURE AT THE ROYAL ACADEMY.

THE present year may be held to fall in the most unfortunate epoch in respect of the conditions under which architectural design is produced which is likely to occur in our generation. We are far enough from the commencement of the to be certain that schemes which were not stopped by its reak have been carried to completion; while we are not iently certain when it will end to prepare for the resumption ull building activity. We have, it is hoped, reached lead point in production, and may look forward to a future in which the dormant chrysalis of architectural gn will be quickened into life—a life more vigorous and hy for the rest given by the laws of circumstance.

t cannot be expected from any profession that the colossal on which the history of nations is being remade, perhaps enturies, can mark a time in which men's creative powers t their best, even if many among our architects were not ling the first duties of patriotism in giving direct national ce to the State. And of those who remain behind few in the mood to dream dreams and visualise solutions for uilding problems which lie before us in the near future.

or these reasons, which react psychologically on all of hether we know it or not, the present exhibition at the lemy is unusually wanting in interest; and, although there many examples of excellent work, there is very little of tanding merit or of great interest. The only large schemes n are those the execution of which depends on the course vents. For example, Mr. Thomas Mawson submits three drawings showing a town-planning scheme for Athens, trating a proposed park system, details of a working-class and a bird's-eye view showing a Governmental centre eived on very ambitious lines. Yet the future of Greece w in the balance, and none of us can say whether she may her way to wider destinies, or has not, on the other hand, ardised what she possesses by her political action.

he well-thought-out proposal of Mr. Barclay Niven, trated by some effective drawings by Mr. Raffles Davison, he removal of the terminus of the South-Eastern Railway e southern side of the river and the planning of a great oach and bridge leading up to it from Charing Cross, is heme which might well be adopted as an appropriate form emorial at the successful termination of a great war, but ld be inappropriate and impossible were the termination e present struggle a costly and inconclusive peace; and so trend of events will not only determine European history will vitally influence the character of architectural problems the localities in which building developments will take e. The Bath Improvement Scheme, which we have trated, is again one of many great projects whose execution t depend on events. Meanwhile the Bath Corporation be congratulated on obtaining the services of Mr. Robert nson, who has produced a design which was only made ible by accurate local knowledge and the use of that ledge by an architect possessing proved ability. It is interesting than most town-planning schemes, for while ost cases the architect only concerns himself with main and general suggestions, Mr. Atkinson has made a careful of the requirements of the buildings to be erected.

n this respect the larger and more ambitious scheme of Barclay Niven and Mr. Raffles Davison for a new Southern terminus, bridge, and approaches is at a certain lvantage, since it would require the services of a great mission, such as has been instituted in many American s. adequately to cope with so immense a problem; but has been shown forms a *précis* or suggestion of the ntages to be gained by the services of such a commission.

nother great town-planning proposal is that dealing with the central part of the City of Oporto, in Portugal, which is illustrated by an excellent model. Mr. Barry Parker shows marked ability in his disposition of masses and a grasp of the fundamental truth that a general Classic feeling is perfectly compatible with marked picturesqueness of treatment. The blocks of buildings, with courtyards open towards the street, which line the axial roadways are delightful in treatment, as are the terminal masses which mark many of the street angles. No other town-planning proposal we have seen gives more promise of architectural success than this does, and we hope it will be carried out in the near future.

Apart from these extensive schemes there is little work shown of architectural size or importance. Sir Aston Webb, R.A., & Sons send in a pleasing view of extensions to the Royal Naval College at Dartmouth,* which form an admirably-proportioned group of buildings, both dignified and simple in treatment. The same architects send a perspective showing a section of the cottages and hall of the Whiteley Homes,* which are very similar to much of Sir Aston Webb's work of a quasi-domestic character. Mr. Ernest Newton exhibits scale elevations of houses on the Sanders Estate* and a design for the Whiteley Homes* (No. 1,694), a well-proportioned example of domestic design.

Mr. Reginald Blomfield's only contribution is a design for a memorial slab to Sir L. Alma-Tadema, O.M., R.A., designed in a scholarly way, in this case especially appropriate. Sir Thomas Graham Jackson is represented by two drawings (Nos. 1,675 and 1,677) which show new buildings in connection with Hertford College, Oxford, as usual indicating the designer's adherence to the precedent which he has followed for so long a term of years. Sir Ernest George sends in a characteristic view of an extension to the crematorium at Golder's Green, rendered in water-colours.

Mr. Richard J. Allison sends two perspectives of buildings for our diplomatists abroad—the British Legation at Cettinjé, suitably designed for its situation and forming an unpretentious and quietly-proportioned square block, and the British Legation at Stockholm, a building equally simple in its main lines, but to which the moulded architraves and dressings of the ground-floor windows give a note of architectural character. Messrs. Percy Adams & Holden exhibit three detailed views of King's College for Women,* which emphasise the admirable architectural quality of their work, suggesting a very pleasing memory of Wren's work at Hampton Court.

The New Board-room for the Metropolitan Water Board, by Mr. Austen Hall,* is hardly up to the quality of the elevations of the offices. "Greek" detail appears to have been a lure to Mr. Hall as to too many of the architects of to-day, who, we are sure, would do better to base their designs on our more traditional and indigenous Renaissance.

One of the largest building schemes exhibited is the University College of South Wales and Monmouthshire, by Mr. W. D. Caröe,* a building designed in a free type of Renaissance and somewhat deficient in the restfulness and dignity which are specially appropriate to large groups of buildings. Those among our architects who have Gothic predilections sometimes fall into this error, while we equally regret the unnecessary formality of others whose work suggests their sympathy with that of the "Greek Revival." But we suppose in all the arts the two types of expression have their value and influence, and determine the mean which it should be our aim to attain to. Mr. J. Theo. Halliday sends a view of his pleasing scheme for Wilmslow Town Hall,* a simple and unaffected example of design, and, in conjunction with his partners, the same architect exhibits a perspective of a picturesque group of five cottages, Bromboro' Port (No. 1,682).*

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*Illustrated in this issue.

The Bicknell Museum, Bordighera, by Mr. Charles J. Tait (No. 1,734), is a delightfully unaffected and "easy" piece of design of a simple hall with apsidal end and columned front, which comes as a relief after much of the stereotyped architecture of the day which seems the result of undue effort.

Mr. Leonard Stokes' design for Lord Mayor Treloar Cripples' Hospital and College* is a somewhat impressionistic view of what should work out as a well-conceived example of design, but its present form rather awakens interest than satisfies inquiry.

In Blackfriars House, New Bridge-street,* Mr. Francis W. Troup has designed an excellent block of offices, employing the smallest amount of architectural detail to give effect to the composition. Interest is created by the skilful division and grouping of the stories, and, though the suggested detail is not rigidly Classic, Mr. Troup has too much knowledge of style to commit errors in taste or to "invent" detail.

Messrs. Willink & Thicknesse send in a view of the Cunard Building, Liverpool (No. 1,663), an immense and well-proportioned Classical building, depending for character on good fenestration and proportions. We could wish that it had more distinct individuality and charm, and feel that the main entrance might have given scope for a rather more interesting treatment than that adopted. The Midland Agricultural College, by Messrs. Everard, Son, & Pick,* is a well-designed block, treated with a great simplicity and reserve, appropriate to the purpose to which it is devoted. Mr. Arnold Mitchell illustrates his scheme for a Secondary School at Luton (No. 1,687), a good example of design of a very simple scholastic character. Messrs. Gibbs, Flockton, & Teather submit in No. 1,744 a view of the proposed extensions of the University of Sheffield, which take the form of an extension of an existing quadrangle, the variation of levels being dealt with by means of steps. The character of the buildings is Tudor, somewhat marred in effect by the necessity of filling in the window openings with plate glass. It has the appearance of an excellent addition, in which the designers have been somewhat tied by the character of the original buildings.

No. 27, Old Bond-street, by Messrs. Trehearne & Norman, is a design of a Neo-Grec type, shown by a rather hard and unconvincing perspective. The architectural treatment is hardly as original or pleasing as the designers' work at the junction of Kingsway and Aldwych, which we illustrated some time ago. In the New Government Offices for the Dominion of New Zealand (No. 1,749), which we gave some months ago, Messrs. Crickmay & Sons have made a pleasing addition to the architecture of the Strand, which badly needs it. Few recent examples of our street architecture are as successful, and in the design the architects show the manner in which Norman Shaw has influenced our contemporary architecture. The note is welcome among the imitations of French Renaissance and Neo-Grec work which have become so frequent. The entrance of the General Medical Council's building, by Mr. Eustace Frere, suggests the influence of a modified type of l'Art Nouveau, but is simple and carefully thought out. A model of a Memorial Chapel, St. Mary's Cemetery, Kensal Green, by Messrs. Romaine-Walker & Jenkins (No. 1,757), shows a carefully and very correctly designed rendering of Decorated character, which is dignified and refined in character, and should come out well in execution.

We doubt whether the model of Mr. Anning Bell's design for the ceiling of the staircase of the British Museum (No. 1,756) gives as good an idea of effect as a drawing would, even with the aid of the mirror, by means of which the ceiling can be seen with ease; the fact that the walls are only indicated renders the model *qua* model almost useless. It is doubtful whether the treatment adopted is quite Classical enough in character to be fully in accord with the building of which it will form a part.

The year's ecclesiastical work includes a fine interior of St. Mary, Sculcoates, Hull, by Mr. Temple Moore,* and a simple and dignified design for St. Luke's Church, Walsall,* in both of which the architect's reputation as a designer is well maintained, and a very interesting church by Mr. Charles E. Bateman entitled Ward End Church.* It is difficult to give the type of design adopted a name, nor are we quite convinced that the effect of the nave arcade and ceiling would be altogether pleasing, but it is a noticeable and original variant from the customary lines of design, and should for that reason be of interest.

Mr. W. D. Caröe is represented by a pleasing view o Saints' Church, Luton*; the low tower with its roof comp very pleasantly with the body of the church.

Mr. Sidney K. Greenslade submits some magnificent p drawings entitled Studies for a Church (No. 1,738), which characteristic both of his great powers as a draughtsman his originality and skill as a designer. He thinks out prob in design and construction with a thoroughness which productive of originality undreamed of by those who satisfied with commonplace solutions. The design, which shall hope to illustrate at a later date, is distinguished qualities of intricacy, delicacy, and refinement, but we sh have been glad of an interior view, which would enable us b to understand the other drawings. The Lady Lever Memo Christ Church, Port Sunlight, by Messrs. William and S Owen, is shown in a drawing which is one of the finest of Raffles Davison's many drawings; the work is of the Perpendicular type, which seems particularly well suited architecture of a memorial character. Lieutenant W. H Blacking (No. 1,742) sends an interesting study for a Renaiss church, in which the groining of the aisle roofs is carrie detached columns standing out from the wall, which corres to columns attached to the piers of the nave. The cent each of these on the nave side is marked by a pilaster entablature of which is returned on itself. The design, th not wholly satisfactory, is carefully considered and nov treatment. Mr. William A. Pite sends a large view of K College Hospital* and a view of St. Peter's Church Vicarage, Acton Green, W. (No. 1,708), a pleasant examp Italian treatment. The various coloured glass designs s the great attraction that this branch of art has for n promising designers, and it is pleasing to record the ma advance which has been made in the art of recent years.

Among many studies of domestic architecture commercial buildings shown, we will only mention a few o most notable :—Two small banks, one at Esher (No. 1, by Mr. W. Ralph Low, and one at Hitchin by Messrs. Luc Lodge, both of them types of pleasing unaffected wor Georgian type; Messrs. Heal's proposed new pren in Tottenham Court-road, by Messrs. Smith & Brew shown in a perspective which does not do justice to design, as its somewhat flamboyant colouring and execu give a suggestion of l'Art Nouveau to what is in realit simple and reasonable treatment of a commercial fr Nursery Training School, Hampstead, by Messrs. Lovegrov Papworth (Nos. 1,664 and 1,688), is a well grouped proportioned brick building, showing the manner in w architectural effects can be composed by simple means. An houses which may be mentioned are Mr. A. N. Prent delightful Tudor design*; Mr. Sidney Tatchell's Weston A Woodmansterne (No. 1,629); Mr. Skipper's Sennowe gates*; Mr. Stanley Crosbie's No. 1, Buckingham-st Westminster (No. 1,670); a very pleasing and interes design for a house at Enfield, by Messrs. Hart & Waterh (No. 1,671), which is picturesque in the best sense of word. Messrs. G. Unsworth & I. Triggs send some exam of their work, which is as usual characterised by a not old-world picturesqueness; and Messrs. Tubbs, Messer, & Po exhibit a House at Beaulieu,* and Mr. Reginald Poulter Maultway House, Camberley.* Mr. P. Morley-Horder is ha at his best in Mallory Court, Warwickshire (No. 1,668), his house at Minehead (No. 1,684) is a pleasant renderin a well-known type. Mr. Harold Trimnell submits a p drawing of an interesting and dignified house (No. 1,695), Mr. Hatchard Smith a quiet design of a large house conce on pleasing lines (No. 1,685).

As we have said, there is little work of pronounced mer great importance, which is only to be expected considering exceptional period through which we are passing, and the cause for congratulation that so much work of at least ave quality has been produced by architects. We hope that year's Academy may fall in times of peace, when the expon of the arts may come again to their own, and when a w at present distracted and troubled will be able to turr energies once more to the prosecution of those occupat which tend to the prosperity of the nation and to the deve ment of the arts.

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* Illustrated in this issue.

NOTES.

ilding erations he War.

THE returns received by the Board of Trade from the principal urban districts of the United Kingdom (exclusive of the County of London), giving the estimated cost of the buildings for which plans have been passed in each quarter of the year, afford some ce (if evidence be needed beyond the actual experience of engaged in the trade) of the influence the war has exerted uilding operations. The returns are made by some ninety-six ls with a population of about 12 millions, and this first quarter 6 shows a net decrease in money of £184,096, or 7·4 per cent. pared with the first quarter of 1915. To gain an idea, however, real effects of the war it is necessary to look back to the same r in 1914. In that quarter, from the returns of ninety-five ls, it appears there was a net decrease of £1,775,677, or 44·8 nt., and of this sum the decrease in dwelling-houses represented .170, or 63 per cent. In the past quarter churches, schools, ublic buildings show the highest percentage of decrease, a n occupied by dwelling-houses in the first quarter of 1915, crease being 71·8 per cent., but dwelling-houses came second decrease of 43·9 per cent. At the present time there is employ- or all, and war activities are the first consideration; but when appy day shall arrive when peace is restored the housing on will require most serious consideration. The war has l wages all round, but with falling wages and a diminished the need for suitable dwelling-houses at a reasonable price acutely felt, and it is to be hoped that then the wholly onable system of taxing house property may be entirely and encouragement be given to those who have war savings e them in the investment of house property, a class of investment hich the Legislature has of late years done its best to warn the off. At the close of the war there is also reason to apprehend r check to the provision of adequate dwelling-houses. The uthorities have been exercising economies in every direction the war, and when it is over a great expansion in the rates e expected to make good arrears.

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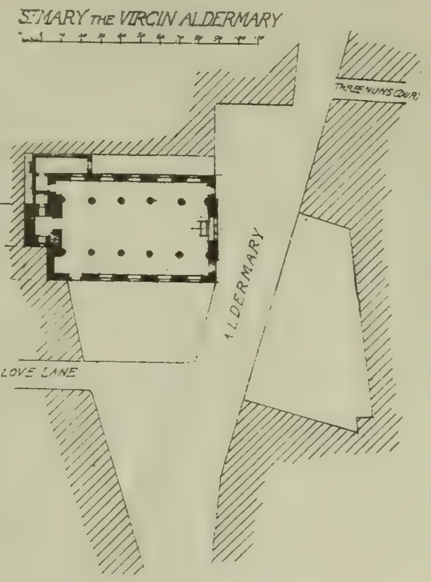
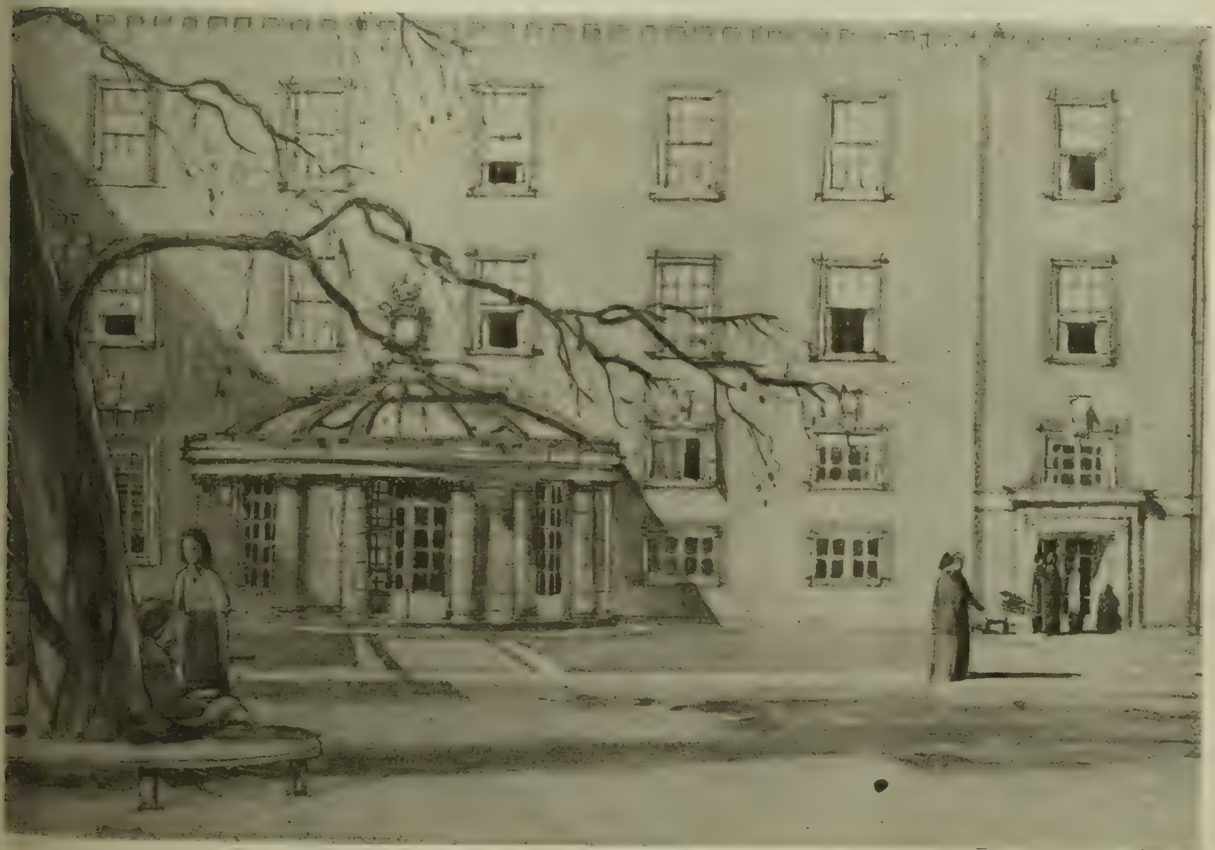
llows ition at R.I.B.A.

IT was a happy thought of the Royal Institute of British Architects to make use of its Common Room for the purpose of temporary exhibitions of an architectural character now that the series of portraits of Past-Presidents that usually adorn the re removed to a position of greater security till the end of the war. Members have been compensated for their absence by the opportunity to examine original drawings by Norman Shaw and Nesfield and by a collection of the working drawings of William Burgess for his house in Melbury-road. The latest exhibition now on view consists of a collection of drawings by Charles Edward Mallows, whose premature death last June entailed so serious a loss both to the Institute and to the profession generally. The exhibition is not completely representative, much of his best work not being available for exhibition, but enough is shown to illustrate his marvellous gift both as a draughtsman and as a designer. This is not the time or place to attempt a final estimate of work of such compelling charm. Everyone should make a special point of seeing it for himself.



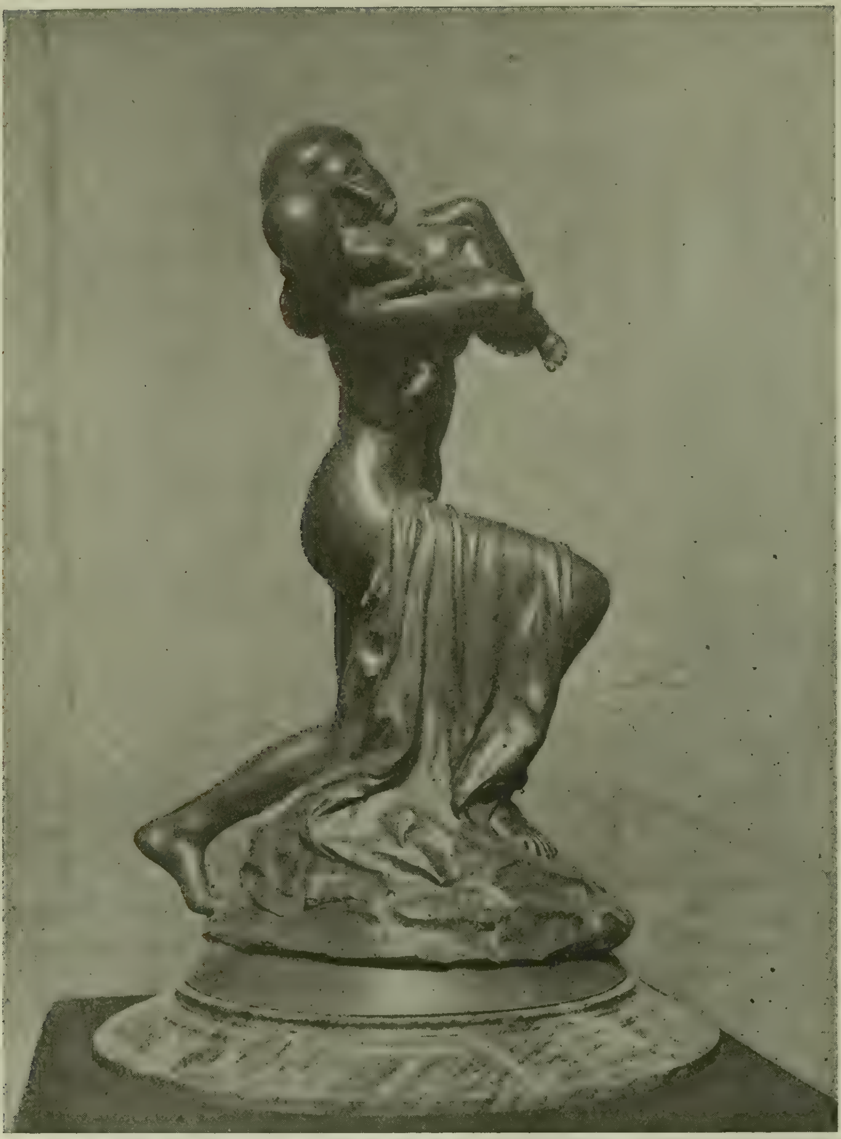
Wren's Churches. (*See page* 329.)

(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)



King's College for Women, Kensington. (R.A. Exhibition, 1916.)

Messrs. H. P. Adams & C. Holden, Architects.



Bronze Group: Mother and Child. (R.A. Exhibition, 1916.)

By Mr. John Angel.

ROYAL ACADEMY SCULPTURE.

The sculpture section at the Royal Academy this year is almost bound to produce a feeling of depression in the mind of the spectator. It is the most important exhibition of sculpture that is held in England, almost the only one, and therefore it is very difficult to get rid of the idea that it must be representative of British sculpture. And when the examples now on view at the Academy are looked at in this light—as representing the best the nation can produce—that feeling of depression is hard to get rid of. For it must be frankly admitted that there is not even one piece of really outstanding merit to be discovered this year. At any rate, if there is it has escaped our notice. There is a little work which is quite sound and competent, there is much that is passable, and there is more that can only be considered passable if we are in a charitable mood.

Were this the best we could do in sculpture we had almost better give up all hope of an English school and send our students to Paris. For what the exhibition so completely lacks is personality. It is all school work, carried out in imitation of one manner or another, and not as the best expression of the artists' thoughts and ideas, and with nothing whatever about it to indicate that it is English except perhaps that most of it would be rejected at the Salon.

What excuse, then, can we make for British sculpture? In the first place, we can say that the Royal Academy is no longer representative of the nation; that the younger generation will no longer send its work there, very well knowing as a matter of fact that it is far too revolutionary to stand a chance of being exhibited. The selection committee which declined Mr. Havard Thomas's "Lycidas" would not be likely to accept work by Messrs. Epstein or Gill. The Academy in sculpture stands very definitely for the Greek tradition—with French influences. The new school, so far as it admires anything outside itself, favours Assyrian, Egyptian, and Oriental work generally. The two schools have no common ground of understanding, and the communication of ideas between them is limited to abuse. Consequently, whether we are prepared to take the work of the newer schools seriously, or whether we are content with the majority to look upon it all as merely epileptiform and unpleasantly pathological, in either case we must admit that only one side of British sculpture is to be found at the Academy.

Secondly, we can urge that the nation is at war, and that sculpture during war-time is so expensive a hobby as to preclude its practice to all except those who actually have commissions to execute. This line of argument is supported by the many names not to be found in the catalogue, and may in very large measure account for the poor quality of the bulk of the work on show.

For these reasons we decline to admit the adequacy of the present exhibition as a ground for condemning British sculpture, though, on the other hand, we are not quite certain that there are really adequate grounds for supposing that a satisfactory state of things does at present
exist in this country. That, however,
too large a question to enter upon now,
must confine ourselves more closely
Academy.

On entering the central hall, where t
monumental pieces are grouped, we we
afresh, as we have often been before,
thought that it would be of immense
to sculptors if they could have at lea
years' training in an architect's office a
to design satisfactorily in the simpler rec
and cylindrical masses that architects
to employ before beginning to com
far more complex forms and masses
sculpture. We are sure such a trainin
be invaluable to them and would
designs of far greater dignity and si
Possibly Mr. Gilbert Bayes has had
training. At any rate, his "Joseph Pr
for the Institute of Chemistry, sugg
he has, and forms a quite adequate th
very original architectural feature,
one of a series which must all be mor
alike.

Close to this is Mr. Montford's "Sto
a figure of heroic size, but not pres
very convincing picture of early man
not nearly Simian enough, and sug
more the Greek idea of the Titans.
this, again, is Mr. John Tweed's mode
statue to Sir John Moore to be er
Shorncliffe. The figure is unconve
posed, and has a good deal of life and m
and constitutes, we think, quite a succ
own line.

Then we come to two groups by Sir G
John, both models of groups from Engi
Heroes Memorial, Liverpool. Seein
without their proper setting of th
memorial it would be unfair to jud
too hardly. We can only say that
stand at present we do not apprecia
and that it would always be better in su
to give a sketch design or photograp
whole memorial. If the whole design
the individual details become of only se
importance.

Mr. Pomeroy's figure of the late Lor
of Belfast comes under the heading o
value for the money, but could hard
been in the nature of things a work
Still, we vastly prefer it to No. 1,767,
labelled "Humanity's Problem" (we
even solve the problem of what Hu
problem could be), or No. 1,765, entit
Zeppelin Triumph." Both of these are i
of the false sentimentality, as disti
from true feeling, of which there has
much about since the war started, and
long before, but less noticeably so. Ins
and art are incompatibles, and atte
mix them always end disastrously.

In complete contrast to these we w
to come upon No. 1,769, a bronze statu
W Marsden. Here one found an easy
pose, good craftsmanship, the forms deli
simplified with great judgment, and t
giving an effect of style which is only t
Not very much perhaps had been att

Mrs. P. G. Bentham. (R.A. Exhibitio

By Mr. P. G. Bentham.

vhat had been tried for had been reached, the result is a thing one would like to have ne's own house—higher praise than could iven to most of the exhibition.

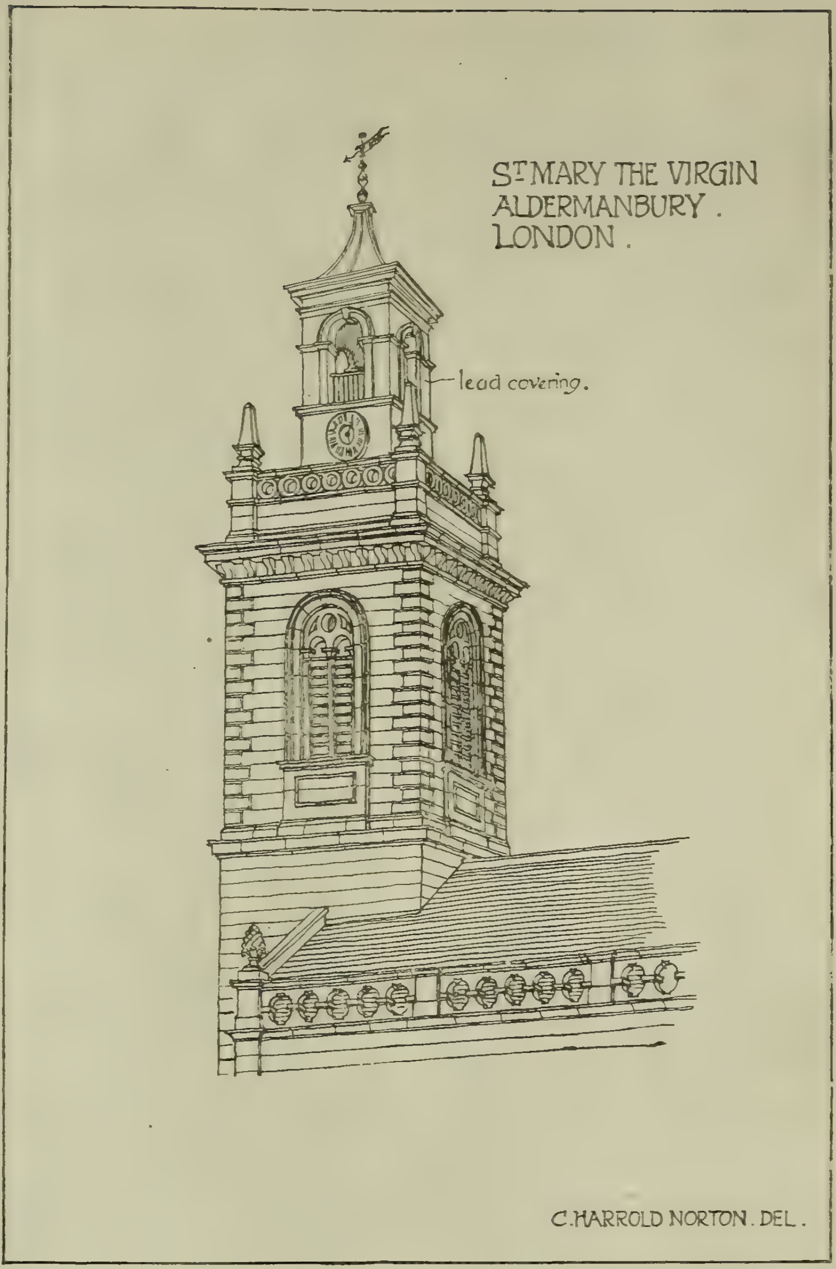
. Bertram Mackennal's marble statue of King in Garter Robes is yet another ple of how apparently inevitable it is that artists become commonplace when they to deal with royalty. They are apparently le to look upon kings and queens in that rsonal way which is so necessary to the ait-painter or sculptor.

No. 1,775, "A Mighty Hunter," Mr. Hodge given us the most delightfully humorous t the same time the most truly decorative ette in the room. It also comes into the catalogue of things we should like to ss.

Thomas Brock's *Titanic* memorial, which ies the position of honour in the room, to us to lack just those qualities which, e said above, an architectural training l almost inevitably give. The composition ghly complex, and is not given strength y really strong basic lines. The contours, re meaningless, and the whole thing fails press because the eye is allowed to wander from one little point of interest to another. rning into the Lecture-room the difficulties asonable criticism are greatly increased. re faced by an enormous array of small ettes, figures of dancers, of animals, rs, children, weeping mothers, and so on. eel that if we had dug these things up anagra, with traces of the old brilliant ring on them, we should have treasured as priceless relics of a past civilisation, vith the inordinate pride of the collector declared them great works of art; but them at the Academy we are fairly ed to know what to say about them. tty knick-knacks" is an old-fashioned e that somehow seems applicable. On hole, perhaps we should be safer not to it ourselves, but to turn to something here we are on surer ground.

at we have in mind is well instanced by ecimens in this room, Nos. 1,853 and 1,881, of which are attempts to design beautiful for objects of everyday use. One is a and the other a garden water-tap; both succeeded. We feel that the bulk of xhibitors who are occupied solely with what is known as "the Ideal Figure" would be far better employed in trying to make the common life of our homes less obtrusively ugly. And we are sure they would find it no easy task to make a decorative kitchen range which, at the same time, would not spoil the cook's temper and the family's digestion. But there is a fortune waiting for the man who can do it

ette: "The Angler." (R.A. Exhibition, 1916.)
By Mr. P. G. Bentham.



BOOK RECEIVED.

Practical Drawing. By E. G. Lutz. (London: B. T. Batsford, Ltd. 6s. net.)

A CORRECTION.

We regret that in our description of Grocers' Hall last week we gave the present surveyor's name as Mr. Charles Blomfield instead of Mr. Arthur Blomfield.

LADY KELVIN'S GIFTS TO GLASGOW UNIVERSITY.

It is announced that the late Lady Kelvin has made two notable bequests to Glasgow University, of which her husband was Chancellor at the time of his death. These are (1) £5,000 for promoting research and the teaching of physical science in connection with the Chair of Natural Philosophy, long held by Lord Kelvin; and (2) all the numerous decorations and medals conferred on Lord Kelvin.

THE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. XXXI.—St. Mary the Virgin, Aldermanbury.

Like St. Michael, Cornhill, the interior of the church of St. Mary, Aldermanbury, has been divested of all interest by an attempt to replace what originally existed by the travesty of design so dear to the heart of the Gothic Revivalists. The church which formerly stood on the site is recorded as having been in existence in 1181, and is frequently mentioned in records of the thirteenth and fourteenth centuries. It was rebuilt in 1437, and again almost completely reconstructed in 1633, and was one of the City churches which possessed a cloister round the churchyard. The present church was completed by Wren in 1677 and cannot be regarded as among the happiest of his efforts. Corinthian columns divide the nave from the two aisles, and the simple elliptical ceiling of the nave is broken in an unfortunate manner by two enormous clerestory windows. Externally the tower and steeple are somewhat commonplace, and the enormous scrolls on either side of the east window destroy the scale of the building, and modern "decoration" has obliterated original "character."

R.A. ILLUSTRATIONS.

"Blackfriars House," New Bridge Street, E.C.

THIS building, when completed, will form the central offices of Messrs. Spicer Brothers, Ltd., paper manufacturers, who will occupy the lower floors. The five upper floors are planned to be let as general business offices in small or large suites to meet the requirements of tenants. The three main frontages to New Bridge-street, Tudor-street, and William-street are faced with Messrs. Doulton & Co.'s Carrara-ware, partly to enable the fronts to be washed down easily, and partly in order to interfere as little as possible with the light to adjoining property.

The main construction is of steelwork carried out under the Building Act of 1909 for that material, but the floor slabs and staircases are of ferro-concrete. Some further details and description of the building will be given in a later issue. Mr. F. W. Troup, F.R.I.B.A., is the architect.

Whiteley Homes and Hall.

Our illustrations include Messrs. Aston Webb & Sons' contribution to the group of buildings erected under the scheme inaugurated in connection with the bequest of the late William Whiteley.

King's College Hospital.

The view shows the completed lay-out, with the exception that certain blocks can have additional stories added thereto. With the exception of two blocks, the whole of the buildings, including the out-patient departments, are in the occupation of the military authorities, and are known as the 4th London General Hospital.

W. A. Pite.

Premiated Design for Block of Five Cottages, Bromboro' Port, Cheshire.

This block of cottages for Messrs. Lever Brothers received one of the premiums offered in the recent competition, in the group of designs for a block containing five cottages. Each cottage has living-room, scullery, larder, water-closet, and cupboard on the ground floor, and three bedrooms on the first floor. In order to give an interesting outline to the group, the end cottages are planned with the scullery behind the living-room, giving them a bold projection in front of the middle cottages, which are of the "one-room-thick" type. This type has the advantage that the main lighting to the important rooms may be from the front or the back, according to the aspect, and alternative designs were therefore submitted for cottages facing to the north or south respectively. The drawing shows a block to face north, the principal window being at the back. Messrs. Halliday & Paterson and C. G. Agate are the architects.

Proposed Country House.

The plans and quantities of this house were prepared last summer with a view to its erection in the Cotswold district, but owing to the continuance of the war the promoter has since decided to postpone proceeding with the work.

The plan of the house is E-shaped, and is of moderate size. The small garden court, 20 ft. wide, with central porch, represented in the accompanying view, faces west. The main entrance is on the east side, on a central axis with the garden porch, and to the south is placed the hall and drawing-room wing.

The illustration shows the six-light dining-room window on the left, behind which, facing north, is a small extra sitting-room. On the first floor are two large bedrooms and three small ones, a dressing-room and two bathrooms, while in the attics accommodation is provided for maid-servants. The traditional style of the locality has been adopted, and a certain picturesque effect is obtained by the grouping of simple gable forms in the courtyard. Stone slates, building stone, and other local materials are intended to be used.

Mr. A. N. Prentice, of Hastings House, Norfolk-street, Strand, is the architect, who is also the author of the water-colour drawing hung in this year's Royal Academy.

St. Margaret's Church, Ward End, Birmingham.

Ward End was a country hamlet in the parish of Aston when the existing small and cheaply-built church of brick and cement was erected some sixty or seventy years ago. The abnormally rapid growth of the city of Birmingham in this direction has enveloped the district, and now the area is being rapidly covered with works and artisans' dwellings.

As a church cannot be taken down except under an Act of Parliament, and as it was not considered decent for the buildings to fall into decay and the churchyard to become derelict by removal to a new site, the problem of making a large extension upon a small site completely filled with grass added to the difficulties. A reinforced concrete raft appeared the only solution, having regard to objections attending the removal of bodies; and this being determined upon, the scheme provides for converting the existing church into a chancel, the old chancel into a morning chapel, and building a new nave and aisles axially north and south, the timber screen being constructional to carry the old roof and the new gable end.

The materials proposed were Littleton blue lias stone in very thin courses showing the weathered edges, and no dressed stone as usually introduced, the glass being kept in position with small oak frames, Cotswold stone slates, and a plastered interior.

Owing to the war the scheme is held up, and probably the developments of the parish may necessitate converting the existing parish church into a mission church and building a new large church in a more central position.

Chas. E. Bateman.

Proposed Church of St. Luke, Walsall.

This church will accommodate between 500 and 600 people. It will consist of a nave and short north and south aisles, a choir three bays in length, with a clerestory, a chapel on the north side, and a narrow south aisle. The walls will be faced with a local grey limestone, and the roofs slated.

Temple Moore.

Bridge and Island Buildings at Mount Melville, St. Andrews, N.B.

The buildings here illustrated are situated in an artificial lake. The island contains some well-grown forest trees, and as the natural level of the ground surrounding the trees is lower than the water level, the walls and buildings surrounding the island serve to disguise this fact. The bridge is built of stone, the buildings for the main part of brickwork covered with harling. The buildings consist of a summer-house, loggia, boat-house, etc. The general contractors for the building works were Messrs. J. H. White & Sons, of St. Andrews. Mr. Paul Waterhouse is the architect. The design, which is not commented on in our article, is in the Water Colour Room of the Academy.

King's College for Women.

Included in our illustrations are three views of this pleasing and appropriately-designed building, which has been carried out from the designs of Messrs. Adams & Holden.

Clapham Maternity Hospital.

Our illustration shows the main entrance to the new wing recently added to this hospital from the designs of Messrs. A. L. Hart and P. Leslie Waterhouse, 1, Verulam-buildings, W.C. The new building was formally opened in July, 1915, by H.R.H. Princess Henriette, Duchess of Vendôme. At the annual meeting which followed the ceremony Dr. Caroline Sturge, who presided, gave an interesting account of the hospital from its inception in 1887, when the old premises in Jeffreys-road were acquired. Various extensions and improvements were made from time to time, but the Committee had long realised that the pressing needs of the district could only be met by the building of a new block, for which there was ground available. As the result of an appeal to the public funds came in slowly, and it was wisely decided to defer building operations until they could be carried out without incurring a great burden of debt. After sixteen years the hopes of the Committee have been realised, and with the exception of a few hundreds still to pay the buildings are e
free from debt. That this has been p
is due largely to the support received fr
King's Fund, and to some "fairy godmo
—anonymous ladies who have stood
the Committee financially through the d
times that so unexpectedly arose. Sin
opening the Director, Dr. Annie McCall,
that every ward has been in constant use

To accord with the Committee's desi
the building should retain the characte
Maternity "Home," rather than of an i
tion, there are no large wards; each v
planned with a floor area of 500 sq. ft.
to accommodate only four or five beds.

For the ward-floors generally Jarral
blocks have been used successfully, and
windows have been fixed throughout
floors are of Kleine construction. Th
of the building is of Doulting stone
Laurence's picked facing bricks in
shades. The site was originally an old
pit which had been deeply worked i
and filled in. The necessary rei
foundations were carried out by the
Concrete Steel Company, Ltd. The gene
tractors were Messrs. J. Chessum & Sons,

Board-Room, Water Board Offices

This is the most important room in t
Water Board Offices which are now being
from the designs of Mr. Austen Hall.

All Saints' Church, Luton.

This very pleasing design ranks amo
best work of Mr. Caröe.

Nos. 194-198, Tottenham Court-Road,

This is a reproduction of a wate
drawing now at the Royal Academy, an
that portion of the Tottenham Cou
front of Messrs. Heal & Sons' premise
rebuilt in connection with the reconst
and enlargement of these premises at
in progress. It is constructed of P
stone, except the ground story, for
Hopton Wood stone is being used; th
windows will be in walnut, other w
in cast-iron, and sundry metal work in
The contract, which was started before
break of war, includes also the erec
bedding and other factories in the rea
general contractor is Mr. F. G. Minter, of
and Messrs. Smith & Brewer are the arc

Houses, Denmark Hill.

Mr. Ernest Newton's work is best
to us through his country houses, bu
pleasing to know that so eminent an a
has been employed to lay-out an est
the result will raise the standard of estat
which is too often of a mediocre nature.

Whiteley Homes.

Our illustration includes the portion
great scheme which has been desig
Mr. Ernest Newton.

Treloar Homes for Cripples.

We give a sketch-view which ill
the extensive group of buildings which
be erected from the designs of Mr. I
Stokes.

The Midland Agricultural and Dairy Sutton Bonington, Nottinghamshir

The buildings illustrated are the first
of a larger scheme which will ultimately
sede the existing College situated o
Belper's estate at Kingston, about tw
away. This institution is being erec
the Board of Governors, consisting of
sentatives from the four County Cou
Derbyshire, Nottinghamshire, Leicest
and Lincolnshire (Lindsay).

The buildings consist of a college
with administrative buildings in con
therewith, a workshop block, and a d
men's hostel for fifty-five student
materials used for facing are local brick
rough texture in slightly varying
Ancaster stone dressings are sparingl
The roofs are covered with grey Bu
slates laid in diminished courses.

e general contractors are, for the main ings, Messrs. Thos. Barlow & Co., Notting- Messrs Henry Hope & Sons, Ltd., ingham, for the engineering plant, con- of a centralised forced hot-water heating hot-water service, and also the cooking ; Messrs. W. J. Furse & Co., Ltd., Notting- for the electric lighting; Messrs. Belliss & m, Ltd., Birmingham, for the compound ressure steam-engines and dynamos; North of England School Furnishing any, Ltd., Darlington, for the laboratory other fittings. The water supply is ed from the Derwent Valley water main, a mile distant. The drainage is delivered he Sutton Bonington system. The total f the buildings now being carried on is £30,000, and the whole of the works have executed under the superintendence of s. Everard, Son, & Pick, of Leicester.

iversity College of South Wales and Monmouthshire.

give a view of the Park Place front of ew College, which has been erected on a Cathays Park, given by the Corporation rdiff. The buildings are designed by illiam Caröe.

litions to Naval College at Dartmouth.

illustrate some recent additions to this building which have been recently carried Messrs. Aston Webb & Sons.

House at Shottermill, Surrey.

s house is built of many-tinted bricks, and and tile-hung with dark-coloured tiles. e outside woodwork is of oak. The g in the R.A. is made in pencil and d chalks. The builders were Messrs. an, Lowry, & Puttick, of Haslemere.

E. J. MAY.

Wilmslow Town Hall.

drawing shows a design which is a n (as far as elevation is concerned) of the remiated design in a recent competition. entrance hall, staircase, and landing the obtuse-angled corner of the block. e first floor the Council chamber occupies ft-hand section of the building, and the ittee-rooms the right-hand section. The l floor contains the surveyor's, clerks', or's, and other offices, while in the the site is a public hall to hold about 400 . The building will be carried out in aced red bricks and Portland stone, the being of green Westmorland slates. Mr. . Halliday, A.R.I.B.A., is the architect.

Sennowe Park.

SE lodges are built of thin red bricks dressings of Clipsham stone, the roofs covered with Cumberland green slates. pper stage of turrets is in oak, with a -covered cupola. The barge-boards are and carved: all the external wood- is in oak. All the stone and wood- g was executed by Messrs. Farmer & y, of Westminster; the wrought-iron gates illes were by Messrs. Singer, of Frome; e plaster-work by Mr. Crotch, of Norwich. iches (late of Cromer) was the general ctor. The whole of the works, including approaches, planting, etc., were carried the designs of Mr. George J. Skipper, B.A., architect, of Norwich.

St. Mary's, Sculcoates, Hull.

church takes the place of an older g, and is situated in a more central n for the population. The old site has become surrounded by mills, and the maining old houses have been condemned. e tablets and other memorials in the old g have been removed to the new church. new church consists of a nave and choir, rth and south aisles, and a large chapel north side of the nave. The organ cupy a gallery in the north choir aisle. ilding is of local bricks with a sparing stone, and the internal wall surfaces are ed. It is intended eventually to com- e nave with a large western tower. contractors are Messrs. Quibell, of Hull.

TEMPLE MOORE.

New Vicarage for St. Peter's Church, Hampstead, N.W.

THE new Vicarage has been recently erected on a site adjoining that of the church as a memorial to the late Rev. F. W. Tremlett, D.D., D.C.L., first Vicar of the parish (1861-1913). The characterless stucco fronts of the surrounding houses in Belsize-square left a freedom of choice both in style and materials.

The building is executed in multi-coloured red facing bricks, with lead-light casement windows and tiled roofs. A touch of ecclesiastical feeling is introduced into the design of the entrance doorway and the internal screen and hall, which are late Tudor in character. The joinery throughout has been executed in Columbian pine, the hall, staircase, and principal rooms being stained with carbolineum.

The building was carried out by Messrs. Joseph Dorey & Co., of Brentford, at a cost of about £2,500. Mr. George H. Paine is the architect.

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OBITUARY.

Mr. G. T. Hine.

It is with regret we have to announce the death of Mr. George Thomas Hine, of 35, Parliament-street, Westminster, who died on April 25 at Fowey, in Cornwall, in his seventy-fifth year. Mr. Hine was the eldest son of the late Thomas Chambers Hine, F.S.A., of Nottingham, with whom he was in partnership until 1891. He was a Fellow of the Institute since 1877, and for some years a member of the Council. After a varied practice with his father he took up the special study of asylum construction. In 1877 he designed the Nottingham Borough Asylum, and in 1887, having won in competition the Claybury Asylum for the London County Council, he removed to London and established himself as a specialist in asylum architecture. In 1901 he read a paper before the Institute. He was later appointed Consulting Architect to H.M. Commissioners in Lunacy for England, which office he held for some twenty years. He designed and completed four of the large asylums for the London County Council, each for 2,000 patients (at a cost of about a third of a million apiece), as well as a number of county and borough asylums throughout the country, such as East Sussex, Worcester, Sunderland, Hertfordshire, Kesteven, Surrey, Gateshead, Hampshire, and Swansea, together with substantial additions at the asylums at Dorchester, Leicester, Nottingham, Moulsford, Wells, Cotford, St. Albans, Devizes, etc. He was a Fellow of the Surveyors' Institution, and an hon. member of the Medico-psychological Society, and a member of other learned societies. In 1909 he took into partnership Mr. H. Carter Pegg, who had been associated with him for over thirty years.

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FIFTY YEARS AGO.

New Dock Works, Sunderland.

THE bridge across the Junction Entrance, being the first portion of the work in connection with the new Hendon Dock, was opened on Wednesday, the 25th ult., by the Chairman of the Commissioners of the River Wear. The bridge, which is of iron, is lifted off its supports by means of a hydraulic press; it works on a water-centre beneath the pivot of the bridge; after being lifted about 2 in. it is swung round by means of handles attached to each wheelwork. The total weight is about 100 tons; its length, 110 ft.; span, 60 ft.; its breadth, 12 ft. 6 in.; depth of outside girders in centre, 5 ft. The bridge, on being swung round, worked admirably.

These dock works, which have progressed favourably since the commencement, two years ago, are expected to be ready for opening throughout on October 1 next. They are from the designs and under the direction of Mr. Thomas Meik, the Commissioners' Engineer. Messrs. Sir W. Armstrong & Co., Newcastle, are the contractors for the machinery.

[*_** From the *Builder* of May 5, 1866.—ED.]

GENERAL NEWS.

Daylight Saving.

It is stated that the First Chamber of the Dutch States-General has passed the Daylight Saving Bill, which had previously been approved by the Second Chamber.

The Late Mr. Englefield.

The late Mr. Frederick William Englefield, of Painters' Hall, Little Trinity-lane, E.C., clerk to the Painter-Stainers' Company, registrar of Maidstone County Court, left estate of the value of £11,698.

Royal Institute of British Architects.

A collection of drawings of old work and sketches and designs by the late Charles Edward Mallows, F.R.I.B.A., kindly lent by his widow, is on view in the Common Room of the Royal Institute of British Architects daily from 10 till 6 till further notice.

Manchester Society of Architects.

At a meeting of the members held on the 26th ult., the Report and accounts were approved and adopted, and the following officers and members of Council were elected:—President, Mr. John B. Gass, F.R.I.B.A.; Vice-Presidents—Messrs. A. W. Hennings, A.R.I.B.A., and Edward Hewitt, F.R.I.B.A.; Hon. Secretary, Mr. Isaac Taylor, F.R.I.B.A.; Assistant Hon. Secretary, Mr. J. T. Halliday, A.R.I.B.A.; Members of Council—Messrs. F. B. Dunkerley, C. E. Elcock, H. Q. Farmer, W. C. Hardisty, T. H. Hill, J. A. M. Hunter, P. D. Lodge, A. J. Murgatroyd, Paul Ogden, J. H. Sellers, J. H. Woodhouse, and P. S. Worthington.

War Memorials.

To the April issue of the *Journal* of the Imperial Arts League, Incorporated, Mr. Harold Speed contributes a short article on "War Memorials," in the course of which he expresses the hope that the tasteless things the Jubilee celebrations produced may not be repeated. The article concludes as follows:—"In order to give artists an opportunity of showing what they are capable of doing the Civic Arts Association is organising an exhibition of designs and models for war memorials, and offering prizes, full particulars of which will be published shortly. It is to be hoped that all those capable of undertaking such work will avail themselves of this opportunity. Surely this tremendous time, with all its deep stirring of the national life, should stimulate the country that produced the arts and crafts movement to some memorials worthy of the great things they are to commemorate."

The Architectural Association.

An ordinary general meeting of the Architectural Association was held at No. 37, Great Smith-street, Westminster, S.W., on Monday, at 4.30 p.m., Mr. H. Austen Hall (President) in the chair. The President proposed a vote of sympathy to the relatives of members of the Association who have fallen in the war since the last meeting—Messrs. J. C. Bucknill, Adrian T. Hardman, and G. M. Mackenzie. The motion was carried in silence. The following gentlemen were elected members:—Mr. Arthur Davis, Mr. E. J. Armstrong (19th Battalion Middlesex Regiment). The President announced the following nominations of candidates for the House List for Session 1916-17, and, as no further nominations were forthcoming, they were declared elected:—

President—Mr. A. G. R. Mackenzie.

Vice-Presidents—Messrs. H. M. Fletcher, Stanley Hamp.

Hon. Treasurer—Mr. F. Winton Newman.

Hon. Editor *A.A. Journal*—Mr. F. C. Eden.

Hon. Librarian—Mr. V. T. Hodgson.

Hon. Secretary—Mr. Ralph Knott.

Ordinary Members of Council:—Past-President—Mr. H. Austen Hall; Messrs. Detmar Blow, Alfred Cox, H. Farquharson, E. Stanley Hall, E. Brantwood Maufe, W. G. Newton, W. J. Palmer-Jones, J. Alan Slater, T. Tyrwhitt, Philip E. Webb.

On the motion of the President a vote of thanks was passed to the retiring members of the Council, Messrs. C. C. Brewer and Maurice E. Webb.

Leading Contents.

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MEETINGS.

Monday, May 8.

Surveyors' Institution.—Mr. F. N. Keen (Barrister-at-Law) on "A Scheme for the Development of Agricultural Land." 5 p.m.

Tuesday, May 9.

Royal Institution.—Mr. L. Binyon on "Chinese Painting." 3 p.m.

Thursday, May 11.

Royal Institution.—Sir Ray Lankester on "Flints and Flint Implements." 3 p.m.

The London Society.—Mr. T. Fairman Ordish, F.S.A., on "Shakespeare's London." 7.30 p.m.

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CORRESPONDENCE.

Mr. Joseph Pennell and the *Studio*.

Sir,—In your issue of the 21st ult. Mr. Pennell prefaces the statement of his views of the "Wonder of Work" by saying that this statement had been "put before the editors of *Engineering* and the *Studio* and rejected."

So far as the *Studio* is concerned, this allegation is erroneous. Following upon a suggestion made by Mr. Pennell himself, there were negotiations between us for an article embodying his views, and he placed at my disposal certain etchings and lithographs for illustrating it, but no such "statement" as that referred to was "put before" me and therefore was not rejected, and the negotiations fell through solely on the question of the illustrations.

The Editor of the "Studio."

The Wonder of Work.

Sir,—May I answer "A Searcher after Truth" by saying that "it is only the comparatively small number of buildings which" not only "even now," but ever counted? Is there more than one Parthenon, more than one Pantheon? He may think that "the manor house and the small church" just "growed up." I don't. They, too, were evolved, and are, some of them, perfect; but that is, or they are, another story. Certainly I am not trying to reveal anything new, but to point out that great artists are carrying on great traditions.

I never suggested a comparison between Reims and the Vulcan Shipyard. Ruskin probably would. He was "intolerant and indefensible." I hope I am not!

And, finally, after having been all over Germany, I only remember one "great war memorial," the Denkmal at Leipzig, and I think the base, which was the beginning and the end of it, mighty fine. But, as I said to an eminent Teuton, why don't you put a monument or even a top on it?

Joseph Pennell.

Sir,—It is perhaps as well that executive artists are not often beguiled into expressing their views on art generally in the characteristic manner in which Mr. Pennell has done in your issue of a fortnight ago, because, unfortunately, we seldom find high executive ability allied with acute critical faculty, and I fear Mr. Pennell is no exception to the rule.

He claims for the engineers of to-day that they are the great unconscious artists of the time, and that they are doing far finer things than modern architects, the only fault of the engineers being an unworthy attachment to photographs!

If such a claim were admitted, architects might despair, for almost any structure, however hideous, so long as it satisfied some vast commercial need and was boldly conceived, would be sanctioned wherever proposed, and the present chaos of good and bad would be emphasised to an appalling degree. This sheer brute force which crushes us to-day would lay its heavy hand over everything until no prospect ever pleased again.

The Railway Age with its ruthless boldness has already marred many a fine street and city, and the "artists" who did it do not know how well they have done it; but Mr. Pennell does, and no doubt with his magic touch could make fine pictures even of some of the worst wrecks, for the simple reason that the picturesque does not necessarily demand elements which are in themselves artistic. Almost any human operations on a large scale make good subjects for the painter, but that argues nothing. Ruins and slums also satisfy picture-makers because they are full of human interest, and the more muddled they are the better they like them; but these things do not by themselves produce fine cities. There must be purpose and design, not only of each part in itself, but in its relation to the whole. A good illustration of this argument is afforded by our London railway bridges. It appears on good authority that the ones which attract foreign artists are not Waterloo and London Bridges, as might have been expected, but the Charing Cross, Blackfriars, and Cannon-street Railway Bridges, because of their picturesqueness and the violent contrast they make against their magnificent surroundings. The unconscious challenge that they make of hard necessity against every other consideration appeals to artists. But the existence of these blots cannot be defended on any ground whatever. Fortunately, it is no longer necessary to cross a river above it, but, even if it were, in such positions these bridges should have been treated architecturally as viaducts and not allowed to obtrude themselves as they do.

But appearances matter little to the engineer; that is the architect's affair. The Greenwich Generating Station of the London County Council is a case in point. This, on account of its size, if left to the engineer, might have been a monstrous erection; but, fortunately, the architect's skill has saved it.

The confusion of thought involved in Mr. Pennell's contentions is dangerous; it crops up all round. The Whistlerites still shout for the precious Lambeth mud-banks and haphazardness of every kind; and, although I feel myself little qualified to write on the subject, I feel that protest should be made in order, if possible, to define the aims of our future policy. So many have a horror of formalism, but beauty and even picturesqueness are not at all incompatible with communal design so long as free play is given to individual artists to deformalise the formal basis which must first be laid down.

Henry J. Leaning.

National Housing and Town Planning Congress.

Sir,—I have read with interest your report of the National Housing and Town Planning Congress recently held in London, and in view of the difficulty of summarising in one article all that transpired in a four days' Congress I feel sure that you will allow me to draw attention to an important phase of the proceedings which does not appear in your admirable report.

To all who attended that Congress the great question appeared to be, who shall provide the houses which are so urgently needed? The general tenor of the meeting on the opening days was directly and distinctly antagonistic to the private house builder. There appeared to be a definite opinion against him on the part of the gentleman who occupied the chair, and several speakers who advocated building by public authorities spoke in a very disparaging manner of the work of the private builder. I think that my remark, which you report, as to calling the builder "nasty names," did appear quite so drastic after listening to speeches as it would appear after reading summary of the proceedings.

The question of urgent national import is to supply the houses for the people qui and on practical lines. With due res to the opinions of the various representat of public authorities present at the Cong I would submit that to ask the Governm to advance £20,000,000 after the war to su houses which are necessary, and which will £160,000,000, is not either a practical, pos or businesslike manner of facing the ques In the first place, £20,000,000 will be a sum to ask the Government for at the clo the war; in the second place, it is mere fraction of the amount required; in the place, the public authorities cannot build h on economic lines in competition with private builder; and last, but most impor if the public authorities compete with pr enterprise by building houses and letting at a loss they will drive the private bu out of business and have to deal with the problem of spending about £50,000,000 annum on the housing of the people.

I think the advocates of private enter brought these points clearly before the Con for it was eventually admitted from the that, as public authorities have only 12,000 houses, private enterprise must be lo to for the solution of the problem. The anachronism of the Congress seemed to the fact that while it was admitted that pr enterprise was indispensable, yet the Con is asking for a subsidy from the Governme enable public bodies to compete with pr builders in a ruinous competition.

But merely destructive criticism is of n in the discussion of this or any other que and I would not write you now if I di believe the solution of the housing pro to be both possible and feasible. The reason why the private house-builder has c to build and why the country is confro with a gigantic problem is that the tre legislation—commencing with the Finance (1909) and terminating with the Increa Rents, etc., Act (1915)—has been towards ing the position of the private builder impos The public speeches of responsible men again and again aimed at the private own of property, until now it would appear almost a disgrace to be the landlord of co property. If this deplorable conditio affairs can be set right, and house pro be once again brought into favour as an in ment, one main factor in the housing pro will have been solved.

The remedy is in the hands of the pr builder and the private investor, his cust who in the past has invested many mi sterling every year in providing homes fo people, and if the Government will app the matter from that point of view this dif problem will be found to be solvable o ordinary commercial basis.

Norman McKellen,
Secretary, Manchester and Di
House Builders' Associatio
27, *Brazenose-street, Manchester.*

St. Mary Aldermary.

Sir,—I am following your valuable of articles upon London City Churches the greatest interest. It is remarkab how many instances the mediæval tower part of the same, was retained in the g or subsequent rebuilding following the This was so in the case of St. Alpheg Sepulchre's, St. Clement Danes, and other

In the case of St. Mary Aldermary you mention that the tower is part of the church, but ascribe it to Wren. It was pleted in 1629 at the cost of £1,000. Daniell's "London City Churches.") A days ago I inspected the masonry of this which clearly differs from that of the building of the church re-erected by Wre

I think it is probable, too, that whe walls of the towers of other City ch show unusual thickness of masonry of the story, as in the case of St. Benet, Wharf, it would be found that the masonry has been encased with new ash

E. Alex. Yo

ROYAL ACADEMY PAINTING.

n a way a remarkable thing, and should
ather disquieting thought to those
ble for the exhibition, that after
months of war precisely the same spirit
to-day the vast majority of the
at the Royal Academy as was observ-
many years before the present
m. It is impossible to reanimate
and the fact that the bulk of the
rs seem still to be obsessed with the
eless trivialities that amused them in
almost forgotten days of peace suggests,
rate. that they are spiritually dead to
influences that daily crowd upon us
times of stress, and are to the more
of us infinitely quickening in effect.

all have read their newspapers and have
f the European crisis, and in the true
commercial enterprise have set to work
the market with war pictures, all, or
all. of which appear to be based on
aphs in the halfpenny illustrated Press,
oubtless appeal strongly to the millions
ake the circulation of the illustrated
ers what it is. Unfortunately, we
t not many picture-buyers will be found
their number.

this spirit of supplying the public with
wants. with what tickles its palate
putting a strain on its intellect, has
nspicuous at the Academy for many years.
. of course, nothing particularly immoral
is; it is no better and no worse than any
ethod of skilled trading. The only pity
the official headquarters of British
painting should encourage so much of that sort of thing as to make the man in the street think that it is what those who really know call "Art." He takes their word for it, and goes away thinking that art is a pretty and amusing toy, but not to be taken seriously by grown men.

There must be many thousands of Englishmen and women who never see a fresh picture from year's end to year's end except for their annual pilgrimage to the Academy. And what does the Academy do for these people? Does it do anything at all to train their eyes to a keener appreciation of beauty? Does it send them away the better for having experienced an æsthetic emotion? We are afraid the answer is "in the negative." The Academy assaults the eye of the visitor with a hundred or more garish mediocrities in glittering gilt frames filling the wall-space from floor to ceiling. Girding up his loins, he boldly attacks the pictures in the first room, making a pencil-mark in his catalogue against anything he likes. With a final hasty glance through the catalogue to see if there are any names he knows, he hurries to the second room, where the process is repeated. In the third room he takes it for granted that the Hanging Committee have done their work properly and that he need not look anywhere but "on the line." By the time he reaches the fourth room his headache has begun, someone steps on his toe, he finds the available seating accommodation is more than fully occupied, and he hurriedly leaves the place neither a better nor a wiser man, needing indeed only the accident of chance to turn him from a potential to an actual criminal. And all this because the Academy for some unfathomable reason will not raise its standard and exclude half, or even three-quarters, of what it at present accepts. There is plenty of sound work at the Academy—there always is—but it is not easy to find, and no man living can look separately and intelligently at 1,612 pictures in one day, or even in a week.

And, of course, the more blatant pictures that spring to the eye are in most cases by no means the best. The finest portrait in the exhibition, for instance, is a very quiet affair, a harmony of subdued black and gold, beautifully balanced, with a quality of paint quite unusually good. This is in the first gallery, and may profitably be compared with the several other portraits which are there—good stock work, but looking strangely uninspired beside Mr. Lavery's fine study of Sir Charles Cheers Wakefield (No. 18). This is not to say that Mr. Arthur Hacker's portrait of the President of the Institute or George Henry's "Sir Perceval Nairne" may not be legitimately admired as sound craftsmanship and adequate likenesses; but Mr. Lavery's work gives us something that they do not, because it has an interest quite apart from, and in addition to, its subject.

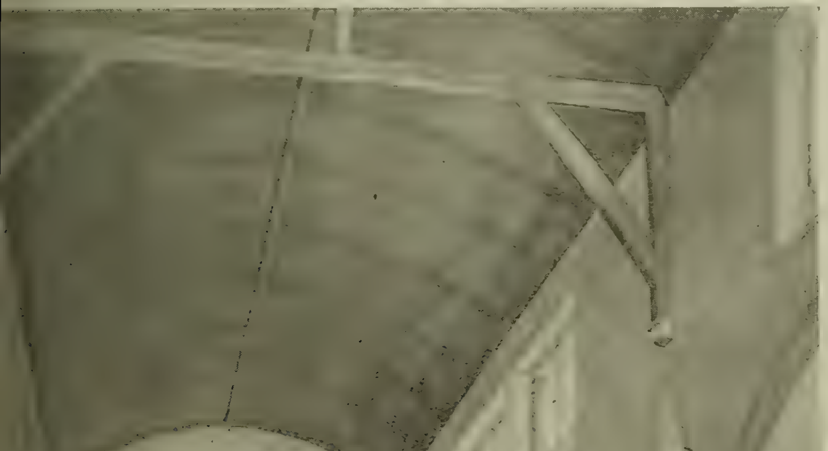
One of Mr. Brangwyn's large decorative canvases is hung in this room, and, like most of his work, challenges immediate attention. That it has great merit goes without saying, but there is about it a certain coarseness of execution which, for us at least, robs the picture of much of the delight we should otherwise derive from it. The big tree in the foreground, for instance, is drawn all in one vertical plane. There is no sense of growth about it, no life; it is merely a system of radiating bands which serve simply to pull the composition together. And, in spite of this summary method of treatment, the various planes of the picture are not distinct. The sky is as near as the house, and the tree is plastered against the house. In a word there is no atmosphere, and with the loss of atmosphere goes a great part of the charm of most landscapes. Even the great Chinese painters, treating landscape on far more rigidly conventional lines than Mr. Brangwyn does, have generally given a wonderful sense of atmosphere. But, in spite of its lack of space and distance, the picture is a good one, because it has coherent design both of line and colour.

We do not as a rule make a practice of calling attention to works which seem to us fundamentally wrong, and it is perhaps bad taste to attack individual painters; but No. 43, in addition to its technical shortcomings. seems to us to sum up so well what we have been saying about commercial art, and is such an obvious example of the insincerity and sentimentality which must always accompany attempts to produce art to please tastes other than the painter's, that we could not help mentioning it. It will, however, probably be one of the most popular pictures of the year.

There are several pleasant landscapes in this room, particularly No. 6, by Mr. Adrian Stokes, and No. 55, by Mr. Hughes-Stanton—the latter familiar enough in style and subject, but the former quite unusual in many ways and justifying the quotation which the artist has inserted in the catalogue:—

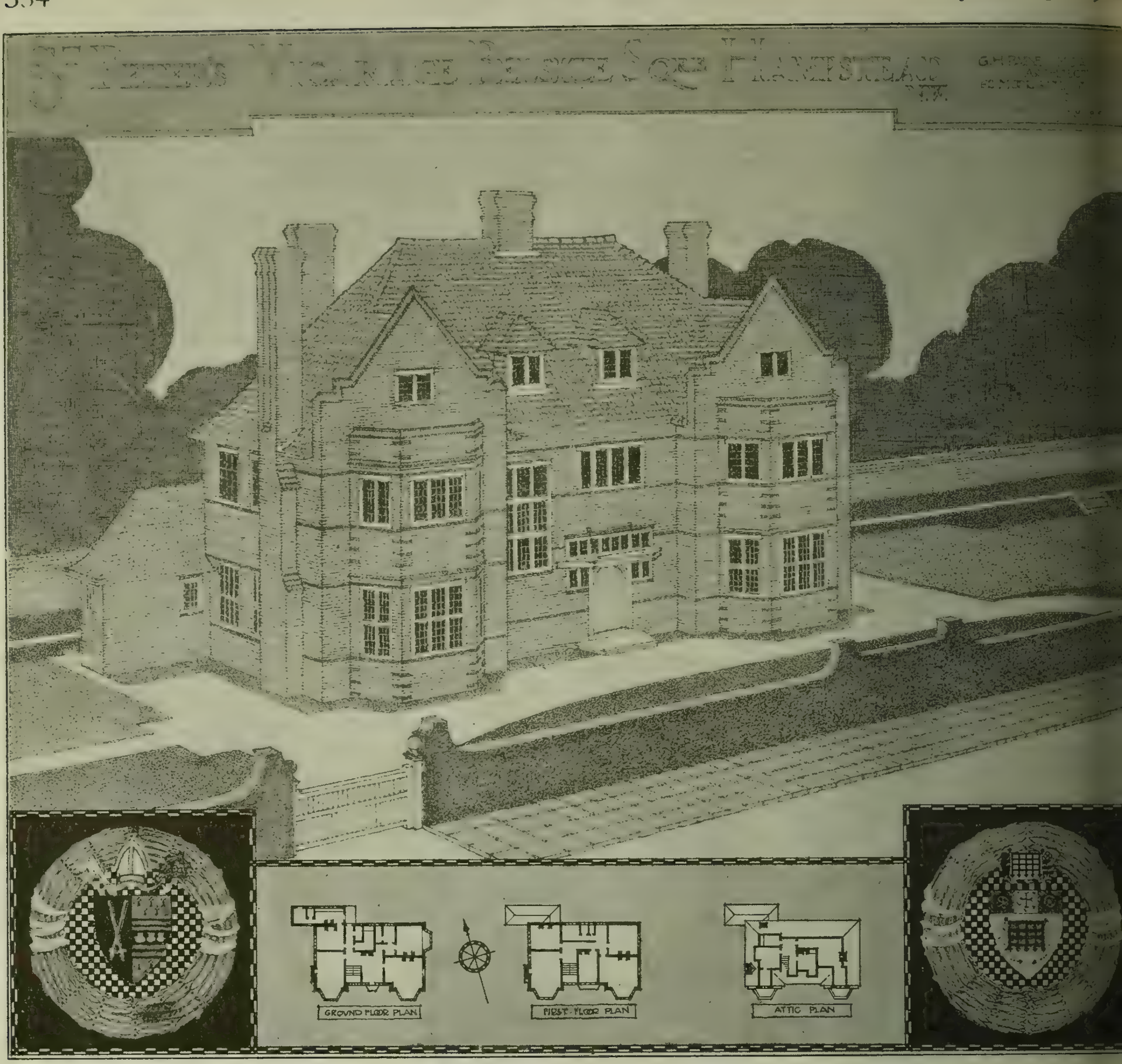
> It is a shaggy world, and yet studded with gardens.—
> B. L. S.

Passing on to the second room, the first picture that calls for mention is No. 65, "The Nativity Morning," by Mr. Cadogan Cowper. This painter has attained an extraordinary degree of skill in the rendering of textures that rivals the Flemish masters. He can paint you silks or satins of which any woman could tell the price per yard. In this case he has applied his talents to a religious subject, but we cannot feel that he has thereby added anything of value. The composition is practically the ordinary stock Italian design—Madonna in the middle, a vista of country seen on either side of her, and dark architectural features running up the sides of the picture. Mr. Cowper's design, in fact, challenges comparison with the art of Raphael, and naturally enough does not get the best of things. His Madonna is only a very ordinary little girl, pretty enough, but obviously much more at home on the lid of a chocolate-box than where Mr. Cowper has put her. This painter will have to look to his laurels, too, for close by, No. 69, is another picture quite in his own style, and quite as


ST MARYS, SCULCOATES.

St. Mary's, Sculcoates, Hull. (R.A. Exhibition, 1916.)

Mr. Temple Moore, Architect



Royal Academy Exhibition, 1916.

successful in its rendering of intricate detail and surface accidents.

Mr. Harold Speed's portrait of H.M. King Albert of Belgium is a creditable attempt to make a king look more dignified than the ordinary run of men; but he should not attempt tricks of artificial lighting in open-air subjects unless, of course, they are skilfully concealed.

In this room also hangs another large design of Mr. Brangwyn's, the "Mater Dolorosa Belgica," a little obvious in design and melodramatic in effect. Not quite as good as the best of Raemaeker's cartoons (which, on a larger scale, is what it really is), but certainly one of the best English attempts to sympathise in terms of paint with that unfortunate nation. In this design, as in the Provençal composition in the first room, the effect is somewhat spoiled by coarseness of drawing. The black outline of the central figure, for instance, is curiously insensitive to the forms which it encloses. Mr. Brangwyn's third picture, No. 447, is perhaps the best thing he is showing this year. Out of very unpromising-looking material he has made a mosaic of beautiful but subdued colour, focused in one small rectangular piece of glowing vermilion. Altogether a really masterly bit of work.

Mr. Clausen has three pictures hung this year—a study of a girl's head (No. 945), which, though beautifully drawn, will probably not attract much attention; a picture of the interior of a barn, a favourite subject of his, but this specimen is one of the best we have seen, the figures being drawn with real force and vigour, but at the same time subordinated to the general design, so that in spite of their being so full of action they do not strike the eye first when one comes upon the picture.

But it is the third of this artist's works which impressed us most. It is called "Youth Mourning," and, though it is not obviously connected with the war, it somehow suggests very forcibly, but without bitterness, the sadness and sense of loss that must always follow strife. There is nothing in the picture but a girl's figure in the foreground, the head bowed down to the earth, and some white crosses in the background which fades away into indefinite mist. As simple a picture as could be conceived, and yet we venture to predict that few will look at it unmoved. Exactly why that particular arrangement of lines and forms should give the spectator emotion is a problem that defies analysis. All we can say with certainty is that the artist has expressed an emotion he really felt, and that if he had not sincerely experienced that emotion he could not have passed it on to us.

Mr. Orpen is another exhibitor who cannot fail to attract attention. He is one of the few modern English painters for whom technical difficulties can scarcely be said to exist. It is perfectly obvious from his work that the rendering in paint of the intricate modelling of a head presents for him few difficulties, and he obtains what he wants without having worried the paint into a heavy dull mass as so many of his less-gifted brethren are apt to do. But this should be enough for him. It was surely not necessary for him to paint a girl in a pale pink dress on a solid black background. True, the result is so striking that no one
who goes into the room can miss it, bu
solidity of the background makes the
look so insubstantial as to give the spe
almost a feeling of physical discomfor
another case Mr. Orpen has provided his
with a brilliant blue background, ma
with such consummate skill, it is true, th
figure does contrive to make headway a
it. It is amazingly clever, but seems t
meretricious device, quite unbecoming
unnecessary for a man of Mr. Orpen's a
and attainments. His best portrait is N
"James Law, Esq., of the *Scotsman.*"
the character of the sitter has intereste
artist, and he has not felt it necessary to
lish his work with extraneous tricks.

Mr. Sargent is only represented this y
two small decorative designs, good as far a
go, but with little individuality about th

Other painters whose work interest
were Mr. D. Y. Cameron, who has a
beautiful landscape called "April" (No.
which combines great delicacy of colou
forcible draughtsmanship. Mr. Charles
has several designs on the lines he has
peculiarly his own. Mr. Strang is hardl
at his best this year, his one large pa
"The Queen of Sheba," seeming to us n
very good as a design nor as an illustratio

For the rest there are innumerable Zep
searchlights, aeroplanes, battleships, destr
and submarines, all, we doubt not, techn
correct; but all, or nearly all, belonging s
to the class of commercial art with wh
critic can in the nature of things have n
to do. Still, if the public likes them they
achieved all their authors hoped for them

LEGAL SECTION.

TES ON CURRENT CASES.

kmen's Compensation—Street Accidents.

HE decisions under the Workmen's Compensation Act may well seem incomprehensible to the layman. In ssue for March 31 we reported a case a man employed as a plumber's mate njured by collision with a motor-car whilst a bicycle in the street. At the time accident he was riding a bicycle belonging employers, and the evidence was that s habitually employed to do so on the business once a day. The arbitrator ound that the accident did not arise out of n the course of his employment, and had for the employers. The Court of Appeal d to disturb this finding on the ground t was a finding of fact which there was nce to support. Mr. Justice Sargant, rer, who formed one of the Court of Appeal, ssed some doubt as to whether it was not a question of law and fact.

days later the court similarly constituted pefore it a case Read *v.* Baker (*Weekly* April 1), in which a solicitor's clerk, once a week on his employer's business o attend a court ten miles distant, and was permitted to perform the journey by train or on his bicycle, was killed llision with a motor lorry whilst return- the office. In this case the arbitrator had that the accident arose out of the man's oyment, and had awarded his dependant ensation. The Court of Appeal set this l aside. The use of the bicycle being in ase permissive would seem at first sight tinction between the two cases; but the appears not to have relied upon this ction, since, according to the report, imated that it must not be assumed that esult would not have been the same even e employer had directed the man to use cycle.

fore considering the reason why these men not considered as entitled to compensation r the Act, we may point out that it is isfactory to find a case upheld in one nce on the ground that there is no power e Court of Appeal to disturb the finding ct, whilst in another case where the facts nearly similar the court below is reversed. me cases it is a pure question of fact, and, urse, then there is no appeal; but the e of Lords, in a case reported since these ions in the Court of Appeal (Herbert el *v.* Fox & Co., 1916, A. C. 405), have Lord Atkinson made some valuable com- s on the duties of arbitrators to find the as distinct from the law, and his Lordship intimated that the determination of the tion whether an accident arose out of the re of the workman's employment as well e question as to what the sphere of that oyment is are questions of law. It inly would assist arbitrators and secure rmity in their decisions and thus obviate necessity for litigation if the appellate s, treating such questions as mixed tions of law and fact, could lay down ral principles.

w in Read *v.* Baker the Court of Appeal that there was no ground for the suggestion a bicycle was such a dangerous article that ermitted user should make an employer for an accident on the road.

in the Act of 1916, there is no limit of ity within which the accident must happen, as the case in the original Act. It is more ult to determine an employer's liability e he sends an employee off his premises is business; but the principle adopted in the ish courts seems to be that if when sent n errand he runs no more risk than any ber of the public, then if an accident ens it does not arise "out of" the employ- t. The above cases illustrate this proposi- and they should be compared with another Pierce *v.* Provident Clothing and Supply pany, Ltd. ([1911] 1 K. B. 997), which was distinguished from Read *v.* Baker by the Court of Appeal. There a man who was employed as a canvasser and collector was killed in the street whilst riding his bicycle with the permission of his employers. The Court of Appeal, reversing the finding of the arbitrator, awarded compensation on the ground that as his employment took him in the streets more than other people the risk of street accidents became an incident of his employment. The principle is illustrated by another recent decision, Chapman *v.* Owner of the ship *John W. Pearn* (March 15, 1916), where the master of the ship, whilst ashore on ship's business, had slipped on a piece of orange peel, and the Court of Appeal held that the employment rendered him no more liable to this risk than any member of the public. We may also instance the case of railway travelling. If a man in the course of his employment has to make occasional railway journeys he runs no risk specially connected with his employment, but it is otherwise if he is engaged in railway work.

The above principle has been adopted in the English courts, but the Scotch Court of Session has taken a different and possibly a more logical view. Thus in the case Bett *v.* Hughes (8 B.W. C. 363) the principle was criticised as introducing a new element of uncertainty in raising the question of frequency with which the risk has to be run. In that case the injured man was a coachman who, when his mistress was in residence, was required every evening to go to a post-office for letters, and was permitted to use his bicycle. The Court of Session awarded him compensation, and in considering the above principle asked how often it was alleged he would have to go to bring him within the Act. The court also pointed out that if in his capacity as coachman he had been required to drive to the post-office and had met with a similar accident he would undoubtedly be within the Act.

This court has, however, no authority to bind the Court of Appeal by its decision, so pending a decision on the point by the House of Lords the law in England appears to be as we have stated it.

Reverting to the case of the plumber's mate (Dennis *v.* A. J. White & Co.), we may, however, point out that even an occasional errand in the streets may involve some special risk connected with the employment. Thus it is not uncommon to see a builder's workman riding a bicycle carrying a plank or some other unwieldy article. If this is done under the employer's orders, or even with his permission, and the workman meets with an accident, it may well follow from the principles indicated above that this would be held to import an unusual element of risk and that the man could recover compensation.

The Increase of Rent and Mortgage Interest Act.

In the case of Welby *v.* Parker, reported briefly in the *Weekly Notes* for April 8, an important point was decided by the Court of Appeal under the Increase of Rent and Mortgage Interest (War Restrictions) Act, 1915.

There seems to have been no question that the mortgage the subject of the action was one to which the Act would apply if the statute was retrospective, the sole question being whether sect. 1 (4) was retrospective.

The mortgage was made on March 5, 1910, the mortgage money being repayable six months later in accordance with the usual form. In June, 1914, the plaintiff, the mortgagee, and the defendant, the mortgagor, served cross notices upon each other for the payment off of the mortgage, but the mortgage was not paid off, and on July 15, 1915, the plaintiff issued a writ to enforce his security by foreclosure or sale. On November 3 he took out a summons for an order *nisi*, which was adjourned to February 28, 1916, when the judge in chambers refused to make the order, and this was an appeal from his refusal.

Sect. 1 (4) provides that it shall not be lawful for any mortgagee under a mortgage to which this Act applies, during the continuance of the Act, and so long as interest at the standard rate is paid and is not more than twenty-one days in arrear, and the covenants by the mortgagor are performed, and so long as the mortgagor keeps the property in a proper state of repair and pays all interest and instalments of principal recoverable under any prior encumbrance, to call in his mortgage or to take any steps for exercising any right of foreclosure or sale or for otherwise enforcing his security.

The Court of Appeal held that the Act did not take away any rights, but merely suspended a remedy, and therefore, as it related merely to procedure, might operate retrospectively, and that both attending on the summons and giving notice of the appeal were "steps taken" in the proceedings.

We have already in a former issue (April 21) shown the extraordinary results of the Act in Lord Bute's case, and that it prevents even a long lease being granted of properties within the Act to a person who was not a tenant and had no other connection with the lessee. The case under consideration has not such drastic results, but nevertheless illustrates the arbitrailry character of the Act. The money was advanced on this small kind of property four and a half years before war broke out; both parties had shown some intention of terminating the loan two months before the war was declared, but the mortgagee, not having taken actual steps to enforce his security until six months before the Act in question was passed, finds himself unable to do so for the duration of the war and for six months afterwards. Many of the persons who have advanced money on this class of property must be in a position in which it is extremely inconvenient, if not serious, to have the money they have advanced locked up, especially in war-time. These two decisions under the Act show what an extremely ill-devised measure it is. When the Bill was introduced we suggested that the proper way of dealing with the matter was by setting up tribunals which could grant relief in any proved case of hardship. The Bill was innocuous as compared with the Act, in which Parliament appears to have lost sight of the original intention of the legislation, and as is now proved it is an absurd measure resulting in fettering and prejudicing certain interests without enabling any inquiry being made as to the circumstances of each case, but purely arbitrarily. In many cases the landlord and mortgagee will be placed in serious difficulties, whilst the tenant and mortgagor require no relief; and, as was shown in Lord Bute's case, sometimes the tenants will also suffer. A person requiring an advance on his property will be unable to obtain it, and building operations will be put an end to. We can only liken the effects of this sort of remedial legislation to the case of the police-constable who, seeing a struggle taking place, arrests the person who has been robbed and releases the thief.

Alien Enemies as Tenants.

Some interesting points in connection with litigation against and by alien enemies who are tenants were decided in the case Halsey and Another *v.* Lowenfeld, Leigh and Curzon, third parties ([1916] 1 K. B. 143). The plaintiffs were assignees of the lessor's interest in the Prince of Wales's Theatre, which had been let in 1895 to the defendant, who was an Austrian subject, an alien enemy. The lease was for twenty-four years at a yearly rent of £6,000, payable in monthly instalments of £500. A sum had been deposited by the defendant as security for the payment of the rent and the performance of the covenants in the lease, and the lease provided that this deposit should be returned by deductions from the rent in the last seven years of the tenancy. The last seven years commenced at Christmas, 1912.

The defendant had assigned the benefit of the lease, and the assignee had covenanted to indemnify the defendant against liability for rent. There had been subsequent assignments and the third parties were sub-lessees.

The action was brought in respect of three months' rent, and the defendant had given notice that he would counterclaim in respect of sums which he alleged should be allowed out of the deposit. He also had served third-party notices, claiming from the assignees under their indemnity.

One of the first points raised in the case was that an alien enemy could not, during the continuance of the war, be sued where the cause of action (in this case the rent falling due) had not accrued until after the war began.

This was an attempt to distinguish the case from the decision of the Court of Appeal in Porter *v.* Freudenberg, in which case it was decided that an alien enemy could be sued for rent which had accrued due before the war began; but the court held that no authority could be found for this distinction. It was therefore held that the defendant could be sued for the rent which became due in June, July, and August, 1915, and it was also held, on the authority of the same case, Porter *v.* Freudenberg ([1915] 1 K. B. 857), that the defendant could, if sued, counterclaim; but the court held that an alien enemy could not take third-party proceedings. Third-party proceedings, although necessary for the presentment of the defendant's whole case, so far as his personal liability is concerned, are independent of the defence to the plaintiff's claim, and they were held to come within the principle laid down in Porter *v.* Freudenberg, that after hostilities have commenced an alien enemy cannot be heard in any suit or proceeding in which he is the person first setting the court in motion. The case is very instructive, as it deals with every point that can arise in actions where alien enemies are sued in connection with the relationship of landlord and tenant.

Whilst we are dealing with this question of alien enemies as tenants we may also draw our readers' attention to another point which was raised in the case London and Northern Estates Company *v.* Schlesinger ([1916] 1 K. B. 20).

In this case the defendant, also an Austrian subject, had taken a flat at Westcliffe-on-Sea for a term of three years from Lady Day, 1914. The agreement contained a provision that the tenant should occupy the rooms and not assign or under-let without obtaining the consent in writing of the landlord, which consent should not unreasonably be withheld.

After the war broke out the Aliens Restriction Orders came into force, which prevented alien enemies residing in prohibited areas, of which Westcliffe-on-Sea is one. The action was brought to recover one quarter's rent due on Lady Day, 1915. The defence was that the Order in Council had had the effect of determining the tenancy.

This contention was based on the case of Krell *v.* Henry ([1903] 2 K. B. 740), one of the cases where a room had been taken with the object of witnessing the procession at the Coronation of the late King, which procession, owing to His Majesty's illness, never took place, and the lessor was held not entitled to recover the balance of the rent which had not been paid before the day. The court distinguished that decision on the ground that in that case the foundation of the contract was the taking place of the procession; but that this was not the case here, since the personal occupation of the premises was not the basis of the contract, for the lessee could sublet, subject to certain conditions, or he could lend them to a friend. It must also be noted that Mr. Justice Lush also questioned whether a tenancy could be treated as a contract and nothing more, so that the same principles should be applied to tenancies and to contracts.

A RUPERT BROOKE MEMORIAL.

It has been decided to set in Rugby Chapel a memorial of Rupert Brooke. It will take the form of a portrait medallion in marble, based on a photograph by Sherril Schell, which appears as the frontispiece of the 1914 volume of poems. The medallion will be the work of Professor J. Havard Thomas.

LAW REPORTS.

COURT OF APPEAL.

(Before Lords Justices SWINFEN EADY, PICKFORD, and BANKES.)

Engineer's Action against Builders: Elliott *v.* C. P. Roberts & Co., Ltd.

IN this case the plaintiff, Mr. Sidney Elliott, a hot-water engineer and fitter, of Stepney, E., appealed from a judgment of Mr. Justice Lush in favour of the defendants, Messrs. C. P. Roberts & Co., Ltd., builders, of Tyssen-street, Dalston-lane.

The plaintiff brought the action to recover damages for personal injuries sustained by him owing to the alleged negligence of the defendants or their servants.

It appeared that the defendants had entered into a contract with the L.C.C. to rebuild a school in Bethnal Green. Under the terms of the contract the defendants were to provide the necessary plant, etc., and to afford facilities for other tradesmen employed by the L.C.C., including the reasonable use of the scaffolding. Defendants had control of the premises and plant. On December 21, 1914, plaintiff, whilst lawfully engaged on the building (though he did not allege that he was employed by the defendants or made any contract with them), when walking across a gangway, which consisted of two planks placed diagonally across an open space, not fixed on either side and having no fence or railing, fell, the boards falling with him, with the result that he sustained serious injuries, and afterwards became paralysed. The gangway in question had been safely used by workmen for three months, and the plaintiff, prior to the accident, had used it for six weeks.

Defendants denied liability, alleging that there had been no negligence by them or their servants and agents.

At the trial the jury returned a verdict for the plaintiff, assessing the damages at £2,000; but Mr. Justice Lush, after hearing arguments, entered judgment for the defendants with costs. His Lordship said, although it was true that the defendants had agreed with the L.C.C. to allow other tradesmen to use the gangway, he did not see how a stranger to a contract could take advantage of it. If the defendants refused to permit the use of the gangway they would be exposed to a claim from the L.C.C., and to no one else. His Lordship came to the conclusion that the plaintiff, being a bare licensee, he could not succeed unless he could prove that the defendants were under a duty under a contract to provide safety. He held, therefore, that there was no breach of duty on the part of the defendants, and entered judgment as before stated. From this decision the plaintiff now appealed upon the ground that the learned Judge should have entered judgment in accordance with the verdict.

Defendants also entered a cross appeal, asking that, in the event of the plaintiff succeeding, there should be a new trial granted upon the grounds that the verdict of the jury was against the weight of the evidence, and that the damages awarded the plaintiff were excessive.

Mr. J. W. Moyses and Mr. A. Davies appeared for the appellant (the plaintiff), and Mr. McCall, K.C., and Mr. Craig Henderson for the respondents (the defendants).

Lord Justice Swinfen Eady, in delivering judgment on the 19th ult., having stated the facts, said he was of opinion that the plaintiff in regard to the use of the gangway was in the position of an invitee so far as the defendants were concerned, and was not in the position, as Mr. Justice Lush had held, of a mere licensee. His Lordship thought further that, as the matters relied upon by the plaintiff as negligence, namely, that the planks were not fixed and the gangway had no handrail, were facts which were obvious to anyone, the defendants had committed no breach of duty towards the plaintiff. He, however, expressed the opinion that the gangway, from the nature of its construction, required inspection and adjustment from time to time in order to see that the boards did not slip, and there was evidence on which the jury might have come to the conclusion that the plaintiff's accident was due to the failure of the defendants to examine and adjust the boards. For these reasons he thought the trial was unsatisfactory. In the circumstances he felt it was impossible to allow the plaintiff to retain the verdict of the jury, and it was also equally impossible to uphold the judgment which had been entered against him, and to say that there was no evidence on which he might have recovered. The result would be that both the verdict of
the jury and the judgment entered again
plaintiff must be set aside, and there mu
a new trial.

His Lordship also added that, althoug
sum awarded by the jury to the plainti
a large one, having regard to his positi
life, he would not, on the ground o
amount of the damages alone, have see
way to order a new trial; but as a new
had been ordered upon other ground
opportunity would be given for a fresh
sideration and assessment of the dama

Lords Justices Pickford and B
delivered judgments to the same effect.

The costs of both parties of the appea
of the first trial were ordered to abid
result of the second trial.

Solicitors: For the plaintiff, Messrs. I
Tompkins, & Co.; for the defendants, M
Clapham, Fraser, & Cook.

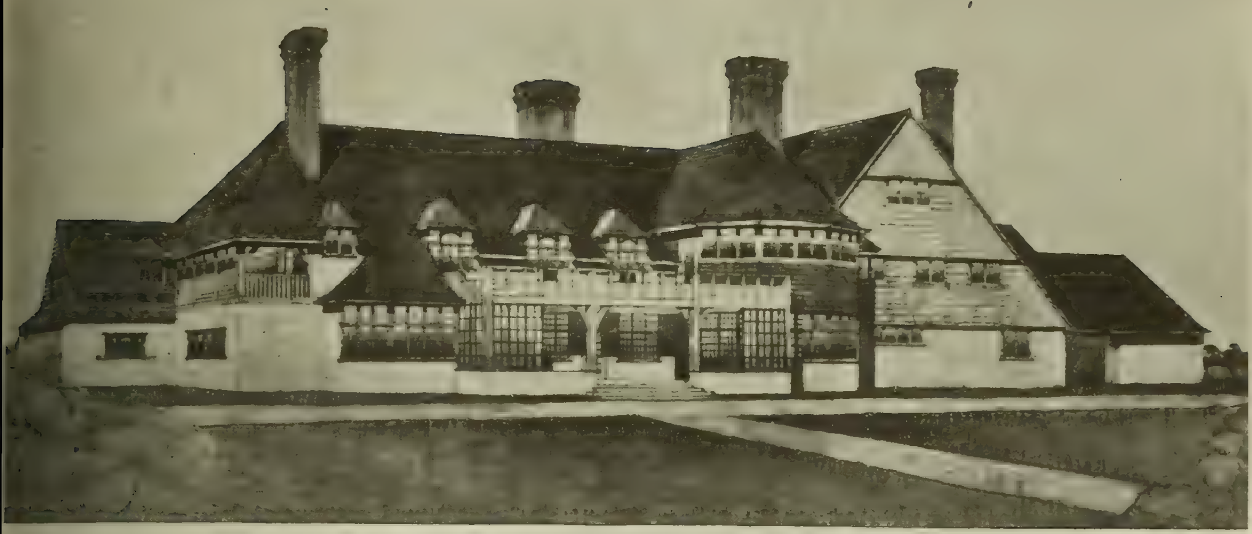
Action against a Building Committee New Church at Laira, Plymouth.

AN action arising out of the erection
Mary's Church, Laira, Plymouth, comm
at the Western Law Courts recently.
plaintiffs are Mr. John William Hamilto
Messrs. Pethick Bros., contractors, an
defendants the members of the Church Bu
Committee. Plaintiffs claimed the su
£952 3s. 7d., balance of amount for work
by Messrs. Pethick Bros. and for goods su
damages for alleged wrongful repudiati
contract, and delivery of plant and ma
belonging to Messrs Pethick Bros., or da
for its detention. Defendants denied lia
and counterclaimed £303 11s. 11d. as liqu
damages for non-completion of contract.

The case came before the Official R
(Mr. E. Pollock, K.C.), and counsel en
were: For the plaintiffs, Mr. A. A. Hu
K.C., and Mr. Arnold Inman, instruct
Messrs. Soames, Edwards, & Jones, Lo
for the defendants, Mr. Clavell Salter,
and Mr. H. Geen, instructed by Messrs. F
& Prance, Plymouth.

In opening the case, Mr. Hudson state
Mr. Hamilton was the assignee from
Receiver for debenture-holders of M
Pethick. Messrs. Pethick were the contr
for the church, and were erecting it whe
defendants served them with notice un
clause in the contract and turned them
Defendants completed the work, and the
of the completion showed that there
balance due to the contractors. If the
had only stood there, there would be no di
but the defendants were seeking to s
liquidated damages in various ways, a
their counterclaim were good it would
that the plaintiffs owed them money inste
the defendants being indebted to the plai
The defence set up was full of technica
They divided the Building Committee int
classes—those who signed as members o
Committee and those who signed as witn
Those who signed as members were ment
as "the defendants," but the others
that they signed as witnesses and not as
bers. The defence also alleged that they
fully determined the contract, and that M
Pethick abandoned the work. It was a
that at that time, if the determinatio
wrongful, plaintiffs were entitled to £782 1
for work done, apart from any questi
materials. If the determination was
ful, £658 4s. 11½d. would be due to the pla
unless the defendants could recover liqui
damages. He submitted that the counte
failed because four persons could not co
claim where eight had contracted. A certi
of the architect was set up by the defenda
the effect that the work could reasonably
been completed by August 30, 1912, a
from which they sought to recover liqui
damages. As a matter of fact, no such
had been specified. With reference to
defence that the Rev. J. T. Marchant
Messrs. Guppy, A. F. Clark, and Smith s
as witnesses, and not as members of
Building Committee, his submission was
even if that were so it would not absolve
from a contract which they ratified by resol
of the Committee.

Counsel went on to refer to the withho
by the architect of certificates for paymen
account to the contractors. On June 17,
Messrs. Pethick wrote, asking for a certi
and stating that £1,000 was due to
Another letter, dated June 20, from the
tractors stated that they had received
£3,160 on account altogether, and that no
had been paid since the beginning of
The architect replied that he would iss
certificate when the contractors were entitl
it, and that depended largely on M
Pethick themselves. He added that at the



House at Beaulieu. (R.A. Exhibition, 1916.)

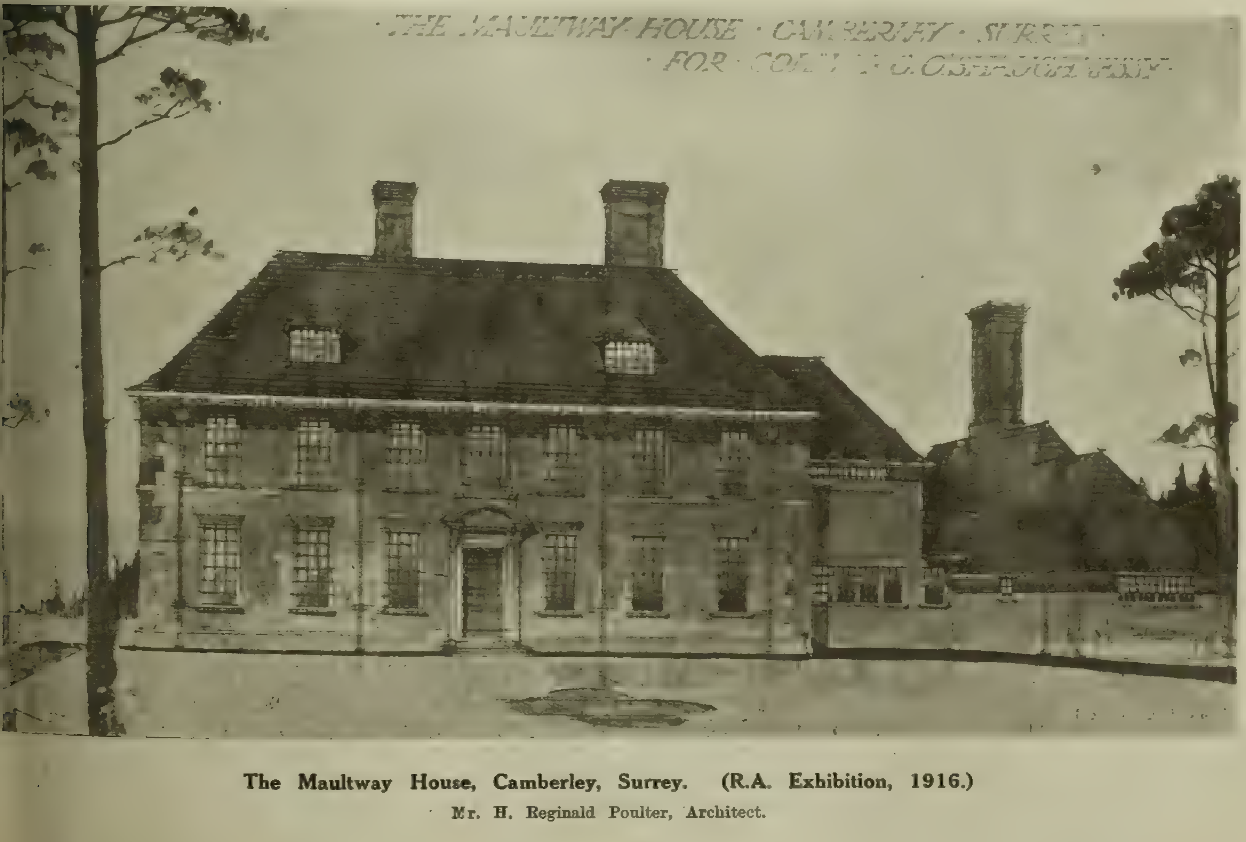
Messrs. Tubbs, Messer, & Poulter, Architects.

last certificate he had considerably over-
ed. Messrs. Pethick subsequently wrote
hey could not be expected to proceed with
ork unless payment were forthcoming.
architect replied that the contractors'
nent that £1,000 was due was "sheer
nse." After further correspondence the
ctors gave the architect notice that unless
had a satisfactory reply from him they
stop work. A contractor who was kept
of so much money could not be expected
on. On July 10, 1913, a certificate for
only was given, "as a concession" and
ut prejudice to the defendants' rights
the contract. Appeals for further pay-
were made by the contractors, but the
ect did not give a certificate, stating that
progress is disgraceful." That was sent
postcard. In a letter in August the archi-
spoke of "interminable delay," and on
t 29, at a meeting of the Building Com-
, the architect was instructed to write to the contractors, requiring them to proceed with the work with reasonable despatch, and giving notice that failing compliance the contract would be determined. At the time of the notice the contractors had been underpaid to the extent of £762 13s. 5d. In September, 1913, the plaintiffs received a cheque for £200 on account. The defence alleged that the contractors abandoned the work. There was no abandonment, as the work proceeded, though slowly, during September. Subsequently to the certificate for the £200 the architect wrote stating that that sum included the price of all the unfixed materials on the site. Plaintiffs wrote stating that they were entitled to considerably more than they had received. After ousting the contractors the Committee completed the work on May 30, 1914, taking eight months to do it. The cost to them was £944, compared with the contract figure of £820.

[*** The conclusion of this report will be given in our next issue.—Ed.]

EFFECT OF WAR ON ROADS.

The report of the Roads Improvement Association stated that, owing to the restriction of road expenditure, the heavy military traffic, and the unfavourable weather, "the roads throughout the country have seriously deteriorated, and no systematic or extensive improvement can at present be expected. It was unfortunate that the Government found it necessary to appropriate the Road Board's income for war purposes. The Association had urged that the fullest advantage be taken of the existing funds to keep the roads in as good a state as possible, and at a suitable opportunity steps would be taken to impress upon the Government the need to restore the whole of the diverted income quickly, as generous State assistance for the roads would be imperative in the future.


· THE MAULTWAY · HOUSE · CAMBERLEY · SURREY ·

The Maultway House, Camberley, Surrey. (R.A. Exhibition, 1916.)

Mr. H. Reginald Poulter, Architect.

THE BUILDING TRADE.

THE REBUILDING OF BELGIUM.

The following paragraphs, which appeared in the daily papers a few months ago, give a faint idea of the work which will have to be done in Belgium when peace is declared:—

"The Belgian Government has compiled statistics as to the destruction wrought by the German army in Belgium.

The total number of houses and public buildings destroyed is 18,207, and details with regard to Flanders (two provinces), Limburg, Hainaut, and Luxemburg are lacking.

The destruction was most complete at Spontin (province of Namur), where 127 out of 130 houses were burnt to the ground, and at Dinant 1,263 out of 1,375. At Louvain, 1,120 out of 7,433 houses were destroyed, while 1,000 were pillaged."

Out of nine provinces of which Belgium is made up there are five from which no details can be obtained, two of which, Flanders and Hainaut, are thickly populated, especially the latter.

In Flanders we have seen the town of Termonde entirely destroyed, and Alost partly destroyed; while since our stand at the Yser all that region has suffered terribly. For many months the town of Nieuport has been bombarded every day with the heaviest German projectiles. This town is completely levelled, as though some huge steam-hammer had crushed the buildings to the ground. Even the foundations are reduced to atoms.

A single one of these projectiles, falling in the Grand Place, which is paved with blocks of stone, made a crater 7 ft. deep and about 10 yds. square, while each piece of pavement became another projectile to be dashed against the houses surrounding the Place, large as it was. Thus one can judge of the effect of one of these bombs on a building, and they have been falling like this for months. Furnes has also been constantly bombarded, but by less powerful guns; in spite of that, though, a great part of the town has been destroyed. And what can we say of Ypres? It must look like Nieuport.

It is certain that for a space of five miles on either side of the actual line of fire all the towns and villages have been systematically destroyed, and thus for a distance of about fifty miles, if we only speak of the Belgian frontier. Thus it is evident that the estimate of 18,207 houses destroyed in Belgian territory must be considerably below the real figures.

And if we leave Belgian territory to pass along the French line of fire, which only ends at the Swiss frontier, think of the tremendous destruction of buildings which has taken place on this other front, some hundreds of miles in length and varying in width from ten to fifteen and sometimes twenty miles.

Then, again, will the firing line always be in the same place? It seems doubtful unless peace is arranged before there is a general offensive in the West.

In considering the possibility of a German retreat as the result of an offensive, it is apparent that the successive stands will multiply tenfold, perhaps a hundredfold, the damage already done to our country, since unfortunately they must all be made in Belgium.

Then if we turn from the consideration of this fearful devastation, which it is not yet possible to estimate properly, and try to imagine the ruined towns and villages on the other fronts, in Poland, in Galicia, in Russia, in the Balkans, we give up any attempt to calculate the amount of labour and material needed to provide even a temporary shelter for those unfortunates driven from their homes by the most horrible war the world has ever known.

Initiative, labour, and materials will be called for throughout the greater part of Europe, which will only add to the difficulties we shall have to face. Has any rebuilding been done in Belgium during the war? We know that whatever has been done is not worth considering. The Germans gave out that they had built up the ruins of Louvain; but in February last the same Germans announced that they do not intend, as was at one time reported, to undertake the rebuilding of Louvain.

Ā propos of this the *Echo Belge* remarked:—

"That it is bad enough that the Germans should have destroyed Louvain, but for them to rebuild it in the German style would be even worse."

On the same subject Mr. John Slater, F.R.I.B.A., presiding at the first Fothergill Lectures, in introducing the lecturer, said:—

"He hoped the Germans would not add to their crime of demolition any attempts to restore according to their own ideas what they had so ruthlessly destroyed."

Besides, it is expressly laid down in the new law, which we quoted in our article of January 7 last, that all building or rebuilding must have the sanction of the Belgian Government officials before being commenced.

However, the Belgians are better prepared than other nations for the raising up of their ruins, because, as the Rev. Herbert West said in a lecture on Belgian Architecture and History, "Belgium has been in the past the scene of constant battles. Only one other country had suffered in a similar way, viz., Palestine. For centuries Palestine battled with the savagery of the Assyrians, and later it was the scene of the contest between Christianity and its progress and the stationary militarism of Mohammedanism. Now on the soil of Belgium the old question of whether mankind should have free development or should be subject to military despotism was being fought again." And very slight knowledge of Belgian history will show that our country has always been the battlefield of Europe.

There, a hundred years ago, came Napoleon to have his power broken, and if on our soil German militarism is to be finally crushed we shall sorrow for our loved and glorious dead, but our sufferings will seem lighter to us because they will have served the cause of humanity. This introduction, though perhaps a little long, brings us to the point when we can consider it as certain that on the declaration of peace everything will require to be done, and we shall find ourselves face to face with one of the most tremendous tasks that any country has ever had to carry out.

Chas. Petein,
Architect.

THE LONDON MASTER BUILDERS' ASSOCIATION.

The Council met twice during March. In the same period important matters were dealt with by the various trade committees.

We take the following from the March Report:—

The Burden of the War.

Consultations with several of the trades in reference to the notices received in January for alteration of the existing Working Rule Agreements proceeded, and in each and every case the attitude was maintained by the employers in accordance with the resolution passed in February last and previously reported. Should no agreement be reached at the Local and Centre Boards the matter will be submitted to the National Board of Conciliation at its meeting which will be held about the middle of June next.

Restriction of Building Work.

Members will no doubt have noticed announcements in the daily Press by the Ministry of Munitions that, owing to the great shortage of certain types of building labour for the purposes of urgent Government work, no
building operations necessitating the e
ment of navvies, excavators, and b
labourers should be started without consu
with the Ministry of Munitions.
apparently is intended to apply more p
larly to prospective building operation
in respect to such work members may a
inquiries to the Building Labour Depar
Ministry of Munitions, 6, Whitehall-g
S.W. The question of prohibition b
Ministry of Munitions of delivery of ste
for building operations in progress is re
careful attention, and negotiation is proc
with the Ministry with respect to the
According to the latest information re
permission will be given for delivery
completed steelwork to buildings for w
has already been prepared, and it is ex
that general prohibition will not last mo
a few months.

Future Prospects.

The Council has given considerat
questions raised by members as to th
plan to be adopted to deal with the adv
market prices, and the uncertainty of ob
material, etc., and the Secretary was ins
to inform inquirers that, as under
conditions it is impossible to foretell the
labour or materials, care should be ta
insert in all building contracts a clause
with the eventuality of any change in
material or rates of labour, and th
condition should be made the basis of all t

THE YORKSHIRE FEDE
TION OF BUILDING TRA
EMPLOYERS.

The monthly meeting of the Ex
Council was held in the Town Hall, Br
on Tuesday, April 18. Mr. R. Finch (Pr
occupied the chair, and fifty-one de
were present.

Limitation of Labour.

Attention was drawn to the action
Ministry of Munitions requesting that
works involving the employment of
and labourers should be commenced
the knowledge and consent of the Minist
it was resolved:—"That this Fede
having regard to the possibility of b
labour being withdrawn, recommends
member to decline to give tenders dur
present abnormal conditions, but offer to
take the work on profit based on per
of cost. Cost should include:—(a)
lishment charges. (b) Insurance, ac
health, unemployment. (c) Cost of o
scaffolding."

National Housing Congress.

The President reported on the proc
of the Congress held in London from Apr
14 inclusive, and pointed out that there
distinct cleavage of opinion, some adv
that private enterprise should be enc
to provide housing accommodation, and
who desired the matter to be taken i
exclusively by local authorities. The
was very strong, although ultimately m
counsels prevailed, and compromises on
of the subjects were effected. It is o
however, that trade unionists and so
generally are pressing local authorit
undertake the provision of housing accom
tion, and in many cases urge that this
be done by direct labour. A resolution
effect was recently passed by the Hudd
Trades Council. It was therefore resol
"That in view of the concerted action
appears to be taken by those desirous
authorities undertaking housing sc
the National Federation be requested
this matter urgent attention, especially
view of securing, if any action is take
work be carried out by contract and
direct labour."

l Decision—Contractual Referee.

tion was called to a recent case before
urt of Appeal (Northern Quarries
y, Ltd. *v.* Wembley Urban District
. Two contracts were let, one for the
tion of the foundation, and the other
supply of material and for work to be
the foundation laid under the first
. Under the second contract the work
e supervised and certificates issued by
uncil's engineer and surveyor, and
ther conditions it was provided, if the
s not properly done, that the Council
e at liberty to employ another con-
and, further, in the event of any
arising, that they should be referred
Council's engineer and surveyor as
r. The Council gave notice of their
to employ another contractor, and
pany commenced an action to recover
unt which it is claimed had been
d on materials and work done. Mr.
Sankey confirmed an order staying
n so that the dispute might be referred
bitration of the engineer in accordance
e Arbitration Clause, but the appeal
ompany was allowed by the Court of

e course of his judgment the Master of
s stated that one of the issues of the
s the duty imposed on the engineer
ying that the foundation laid by the
tractors was in a fit condition to receive
tiff company's material, and that this
ot reasonably be tried without the
going into the witness-box for
tion and cross-examination.
Justice Warrington pointed out that he
it quite clear that the decision of the
between the parties would, in the
course, eventually depend on the
to be given by the surveyor himself.
ing so, the action was covered by an
which had been expressed in the House
to the effect that where there is a *bonâ*
ute, involving a substantial sum and a
conflict of evidence in matters as to
he arbitrator himself would, in the
course, be the principal witness on one
might lead to a miscarriage of justice
bitration were allowed to proceed, as
e parties would thereby be deprived of
of testing the truth by cross-examina-
even prevented from raising particular

circumstances their Lordships decided
action ought not to be stayed.

GOVERNMENT CONTRACTS.

War Offices.

rs.—Acme Patent Ladder Company,
ley-street, Earlsfield, S.W.; H. C.
, Preston-street, Bradford.
nd Nuts.—Bayliss, Jones, & Bayliss,
olverhampton; F. W. Cotterill, Ltd.,
orks, Darlaston; J. Gadd & Sons, Ltd.,
th, Birmingham; Guest, Keen, &
lds, Ltd., London Works, Smethwick,
ham; Horton & Son, Ltd., New Alma
Darlaston; T. W. Lench, Ltd., Black-
Birmingham; Stones Bros., Ltd.,
Works, West Bromwich; J. Wiley &
d., Eagle Works, Darlaston.
, *Oil; Cylinders, etc.*—J. Feaver, 120,
ridge-road, S.E.
s, Oil, etc.—Blackstone & Co., 81,
street, E.C.; Claud Hamilton, Ltd.,
reet, Glasgow; Petters, Ltd., 140,
-street, Bristol.
s, Steam, and Spares.—Clayton &
orth, Ltd., Lincoln.
ised Ware.—Bird, Stevens, & Co., Sun
Quarry Bank, Brierley-hill; J. & D.
td., Lye, Stourbridge; Hingley &
Ltd., Stone Works, Lye; Holt &
Hayes' Galvanised Iron Works, Lye,
dge; Homer, Short, & Homer,
-street, Lye, Stourbridge; Ludlow
13), Ltd., Palmer-street, Birmingham;
te Galvanising Company, Nine Locks
Brierley-hill.
. *Pickaxe.*—G. Dickie & Son, Chester-
ills, Birkenhead.
and Lanterns, etc.—Acetylene Cor-
of Great Britain, Ltd., Esher-street,
ster, S.W.; C. Collins, Ltd., 30/2, St.
uare, Birmingham; J. Hinks & Son,
reat Hampton-street, Birmingham;
Shakespeare, & Co., Ltd., Garrison Works, Garrison-lane, Birmingham; G. Polkey, Ltd., Pitsford-street, Birmingham; Rippingille's Albion Lamp Company, Ltd., Aston-road, Birmingham.

Maintenance of Camps and W.D. Buildings at—Bury: Richard Holt, Silver-street-chambers, Bury; Handforth: Daniel Eadie & Co., Ltd., Short-street, Stockport; Leamington: A. J. Lord, Woolston, near Coventry; Leigh: Thomas Collier, 2, Chester-street, Leigh; Mansfield: A. Bunting & Son, Belvedere-street, Mansfield; Portsea: G. F. Smith & Co., 2 and 4, Eldon-street, Portsmouth.

Pipe, Fittings, etc.—Stewarts & Lloyds, Ltd., Dalmarnock Bridge, Glasgow, etc.

Plant, Water-Distilling.—Caird & Rayner, 777, Commercial-road, E.

Plates, Steel.—Braithwaite & Kirk, 15, Henry-street, West Bromwich.

Safes.—Ratner Safe Company, Ltd., Hancock-road, Bow, E.; S. Withers & Co., Ltd., Park Works, West Bromwich.

India Office : Store Department.

Cement.—Associated Portland Cement Manufacturers, Ltd., Lloyd's-avenue, E.C.

Engines.—J. Simpson & Co., Grosvenor-road, S.W.

Generator Sets.—Lancashire Dynamo, etc., Company, Trafford Park, Manchester.

Joists.—Dorman, Long, & Co., Middlesbrough.

Oil.—J. L. Wade & Co., Nine Elms-lane, S.W.

Screw Spikes.—F. W. Cotterill, Ltd., Darlaston.

Steel.—Smith & McLean, Gartcosh, Glasgow.

Steel Sheets.—J. Lysaght, Ltd., Bristol.

H.M. Office of Works.

Building Works, etc.—Huts, racks, etc.: Holloway Bros. (London), Ltd., Bridge Wharf, Grosvenor-road, S.W.; Holland & Hannen, 12, Hyde-street, Bloomsbury, W.C.; Fred Pitcher, Ltd., 133, Marylebone-road, N.W.; Leslie & Co., Ltd., Kensington-square, W. Admiralty, temporary buildings erection: Leslie & Co., Ltd., Kensington-square, W. Ordinary works and repairs to buildings in the following districts to March, 1917:—Hampton Court, Kew, Richmond, etc.: W. H. Gaze & Sons, Ltd., Bridge-street, Walton-on-Thames; Newcastle-on-Tyne: Kirk & Brown, Byker Bridge, Newcastle-on-Tyne.

Engineering Works, etc.—Addlestone Research Institute, heating and hot-water supply: T. J. Boulting & Sons, 16/18, Union-street, W.; Edinburgh Inland Revenue Office, electric passenger lift: Aldous & Campbell, Ltd., Lower Bland-street, S.E.; National Physical Laboratory, Teddington, fire service mains: Wm. Press & Son, 19, Old Queen-street, Westminster, S.W.; Westminster Government Offices, southern buildings extension, hydraulic lifts: Aldous & Campbell, Ltd., Lower Bland-street, S.E.; electric paper and coal lifts: Medway's Safety Lift Company, Rolt-street, Deptford, S.E.; electric passenger lifts: Waygood-Otis, Ltd., Falmouth-road, Great Dover-street, S.E.

Furniture.—Benches: The North of England School Furnishing Company, Ltd., Darlington. Bookcases (60): T. A. Moore & Son, Moorfield-road, Bridlington. Folding chairs (3,000): R. H. Baveystock & Nephew, 121, Great Cambridge-street, N.E.: E. Atkins, Church-row, Bethnal Green, N.E.; E. Smith & Sons, 2, Gays-buildings, Kingsland-road, N.E. Chests of drawers and wardrobes (250): E. Bean, Ltd., 50, Great Eastern-street, E.C. Stationery lockers, etc. (274): G. M. Hammer & Co., Ltd., Crown Works, St. James's-road, S.E.: S. Froom & Sons, Sherbourne-street, Chorley, Lancs. Presses (255): Henry Addison & Co., Ltd., Waterloo Works, Wellington, Salop; J. T. Ellis & Co., Ltd., Wakefield-road, Huddersfield; Kingfisher, Ltd., West Bromwich. Presses (150): G. M. Hammer & Co., Ltd., St. James's-road, Bermondsey, S.E.: Wake & Dean, Ltd., Yatton, Bristol. Committee tables (72): Barnstaple Cabinet Company, Newport, Barnstaple; North of England School Furnishing Company, Darlington. Folding tables (1,600): Kingfisher, Ltd., West Bromwich; North of England School Furnishing Company, Darlington. Writing tables (400): Wake & Dean, Ltd., Yatton, Bristol.

Miscellaneous.—Lavatory basins and sinks: George Howson & Sons, Ltd., Eastwood Sanitary Works, Hanley; B. Finch & Co., Ltd., 82, Belvedere-road, S.E.

H.M. Prison Commission.

Materials for Painters', Plumbers', and Glaziers' Work (Schedule 77).—Baxendale & Co., Miller-street Works, Manchester; Middleton Bros., St. George-street, E.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Avonmouth.—At a recent meeting of the Housing of the Working Classes Sub-Committee of the Health Committee it was stated that the Docks Committee desired to erect nineteen houses on vacant land under their management at King-street, Avonmouth, for the accommodation of men employed at the Docks.

Barrow.—The T.C. has passed plans for a new picture theatre to be built at Barrow by Mr. and Mrs. Routledge, Ltd.

Bassaleg (Mon.).—Commander Lord Tredegar has decided to erect a chapel at Bassaleg Parish Church, Monmouthshire, to the memory of his father, Colonel the Hon. Frederic C. Morgan, M.P., and his uncle, Viscount Tredegar.

Berkeley.—Mrs. T. P. Bailey has offered to put in the Parish Church a new heating apparatus, at a cost of £150.

Bridgwater.—At a recent meeting of Bridgwater R.D.C. a resolution was received, passed by the Thurloxton parish meeting, expressing the opinion that it was desirable an isolation hospital be provided for the district with as little delay as possible.

Broadstairs and St. Peter's.—The U.D.C. has approved the plan of a new dwelling-house, Lyndhurst-road, for Mr. G. H. Fuggle.

Chester.—In reference to the Buddicum Estate, the L.G.B. has suggested that the T.C. should proceed at once to obtain tenders for the erection of the proposed houses, and should submit a formal application for sanction to the loan required for that purpose, together with full particulars of the scheme.

Doncaster.—At the vestry meeting at Christ Church, Doncaster, recently the vicar called attention to the urgent necessity of repairs to the fabric. He suggested that the crypt might be converted into a vestry at a cost of £200, which would allow the baptistry to be used for its original purpose. Funds are being raised in aid of the new Wesleyan school building scheme. A site has been selected, and the total cost of the buildings is estimated at £5,000.

Dudley.—In reference to the Corporation scheme for the erection of 300 houses, the T.C. has accepted tenders by the following contractors:—Mr. William Roe (Wolverhampton), for the erection of thirty houses; Mr. Thomas Higgs (Wolverhampton), fifty-four houses; Messrs. Jenkinson & Davies (Rhondda), forty houses; Dudley Amalgamated Builders (Dudley), ninety houses; Messrs. Rogers & Sons (Cardiff), eighty-six houses; Messrs. Lewis & Taplin (Birmingham), for the construction of new roads and sewers on the Brewery Fields Estate (the site of the scheme), and for the widening of Bunns-lane and St. John's-road, and the construction of new sewers therein.

Dundee.—Plans and sections of proposed new buildings, etc., in Dundee have been submitted to the Works Committee of the T.C.:—Argyle-street, additions to villa, for Mr. James Smith; Bellfield-street, workshop and offices, for Messrs. Urquhart, Lindsay, & Co., Ltd.; Dundee-road, additions to cottage, for the trustees of the late Mr. John Sharp; Osborne-place, alterations on villa, for Sir James Urquhart; Strathmartine-road, alterations on and additions to office, for Messrs. Thomas Muir, Son, & Patton, Ltd.

Durham.—The R.D.C. has approved a plan submitted by the trustees for addition to Wesleyan Chapel.

Foleshill.—At a recent meeting of the Guardians and D.C. plans were approved for six bungalows at Bedlam-lane, Foleshill, for the British Bungalow Syndicate.

Glasgow.—We understand that a syndicate has secured a site at Eglinton Toll, Glasgow, for the erection of a new house of entertainment capable of seating 3,000 people.

Houghton Le Spring.—The Children's Homes Building Committee has agreed that an architect be engaged to draw up a specification of what is required to redecorate the homes, that tenders be obtained, and that the L.G.B. be informed of the steps the Guardians are taking.

Huddersfield.—Plans for extensive buildings for British Dyes, Ltd., have been approved by the B.C.

Hull.—The L.G.B. has sanctioned the borrowing of £20,230 by the Corporation to meet the expenses in respect of works and purchase of land in connection with the abolition of the Stoneferry-road level crossing.

India.—A proposal is before the Commissioners of the Station Municipality for an overhead reservoir and electric pumping plant to serve as

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* See also our list of Competitions, Contracts, etc., on page 342.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Brick-layers.	Car-penters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Masons' La-bourers.	Brick-layers' La-bourers.	Plas-terers' La-bourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	10½	10	8½	10	9	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	9½	9½	10	10	9¼	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6½	7	½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	9¾	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9½	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10¼	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10½	10	10	8½	7½	7½	8
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	9½	10½	9	8½	8½	9
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	9½	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10	10	8¾	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	10½	10	9	9½	7¼	7¼	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9½	8½	10	8	6¼	6¼	6½
Warrington	8¾	10½	10½	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	10	9½	10¼	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	11	8	10	8	7½	7½	7½
Worcester	8½	9½	9½	9	9	9	7½	6½	6½	6½
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

a water-carriage system for the conservan
the south of Bangalore. A joint scheme fo
water supply of Murshidabad and Jiaganj,
estimated cost of Rs. 2,14,000, has been re
for the consideration of the Murshi
Municipalities.

Irvine.—It is reported that another k
house will be erected by the Scottish Kin
Ltd., at a cost of about £4,000, on a s
Montgomery-street.

London.—Mrs. Eve has offered to resea
church of St. Mary, Stoke Newington, in o
a memorial to her late husband.

Manchester.—The City Council has been
to consider the desirability of placing a
disposal of the L.G.B. the surplus land o
Corporation suitable for house building pur
and of endeavouring to obtain their assis
in financing a scheme of housing on that la

Newcastle.—At a recent meeting of the
Improvement and Streets Committee of
Newcastle Corporation the question of a
main road from Newcastle to Whitley Ba
considered. It was decided to authorise th
Engineer to take levels and surveys and
with the other authorities concerned.
scheme will not be begun until after the w

Ottawa.—Draft plans of the proposed
Parliament Buildings at Ottawa have been
pleted. The plans are more or less tent
and have yet to receive formal approval
Cabinet and of Parliament.

Richmond (Surrey).—A private conferen
representatives of Richmond and Barnes
cils has agreed upon a scheme for the er
of a dust destructor by Richmond. The sc
it is understood, will be submitted t
Councils shortly.

St. Ives (Cornwall).—The T.C. has appro
plan of stables to be erected at York Hou
behalf of the Misses Knapp, and a pl
additions to a house in Gabriel-street own
Mr. Bottrell.

Spain.—Tenders will be opened at
"Dirección-General de Obras Públicas,
terio de Fomento," Madrid, on May 31, fo
construction and working, for a period of n
nine years, of a secondary railway from Ali
to Alcoy. The cost of construction is esti
at 13,478,236 pesetas (about £539,100). Re
to calls for tenders by the Municipality o
celona for the carrying out of street dra
and sewerage works in that city, it is anno
that tenders will be opened at the "Casa
sistorial," Barcelona, on May 12, for the
ing out of further similar works in Barce
at a total estimated cost of 411,464 p
(about £16,460).

Stalybridge.—The late Mr. John Fre
Cheetham, of Eastwood, Stalybridge, subj
the right of his sister Agnes to occupy the
during her life, has given Eastwood
20 acres of land for a public park fo
residents of Stalybridge, £18,000 as an e
ment fund for the upkeep thereof, and
towards the expenses of adapting and al
the house and lands for the purposes spe
and the woodland adjoining thereto is to b
as a sanctuary or reserve for the fauna and
of the district.

Uckfield.—The Council has approved pla
the alteration of premises in High-stree
Mr. H. Hammond.

Uxbridge.—The U.D.C. has adopted
ments for sale of land for extending Whit
road.

Wallsend.—At the annual vestry meeti
St. Luke's Church, Wallsend, the
announced that the scheme to divide the
and erect a new church was now an assure
A site has been secured behind Neptune
and it is proposed to erect a Sunday school

Weston-super-Mare.—The Water Supply
mittee has resolved that the Surveyor's pl
a proposed extension of the machine shop
waterworks pumping station be approved
carried out as soon as convenient.

Windsor.—It has been decided to erect
stained-glass windows in St. Nathaniel's Ch
Windsor, in memory of Miss Elizabeth P
and two marble tablets to the memory of
Hasepden and Mr. Cave.

Woburn Sands.—Miss Ann Elizabeth Gre
The Laurels, Woburn Sands, who die
February 16, has bequeathed £400 for a
and a peal of bells of the church at Wo
Sands.

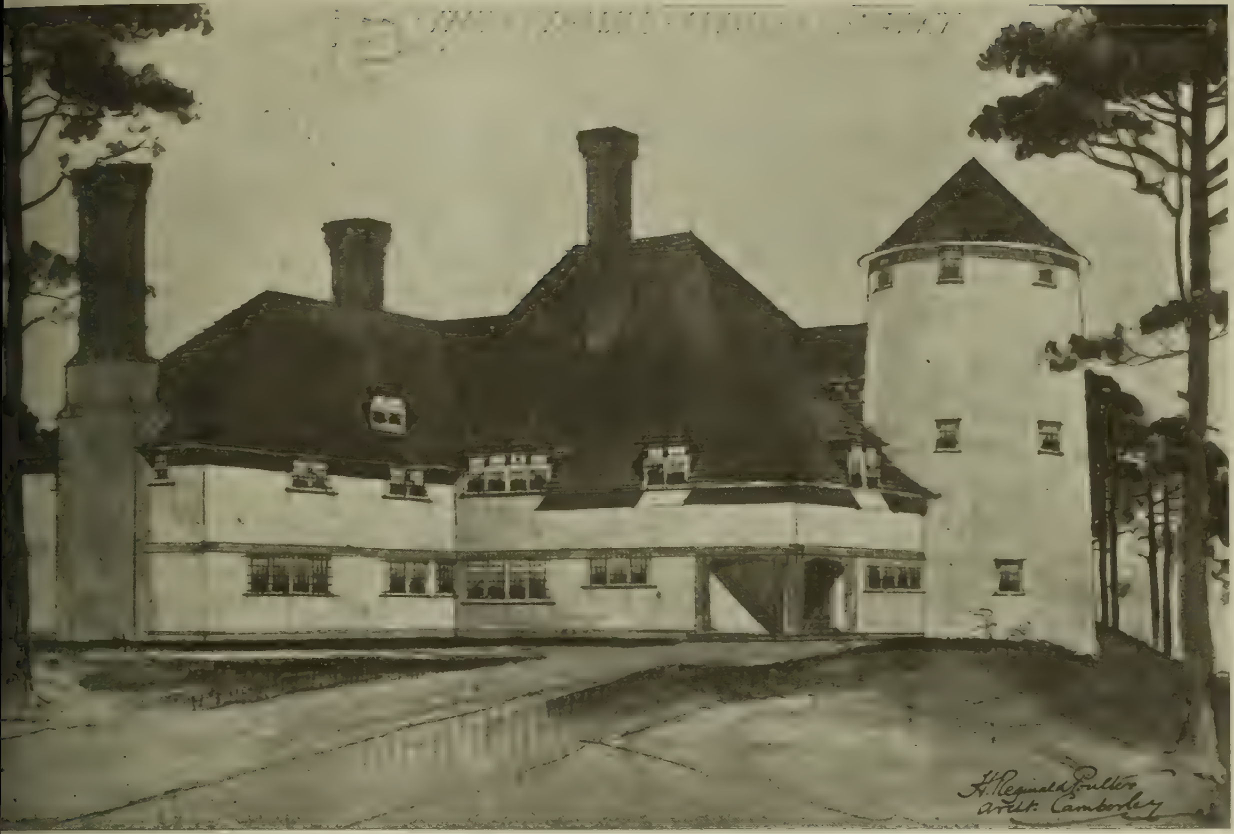
TRADE NEWS.

Boyle's latest patent "air-pump" ve
tors have been adopted at St. Mary's Hos
Paddington, W.

We are informed that a 5,000-gallon
built at Cerne, Dorset, four years ago
Pudloed cement concrete is still perf
watertight.

The General Hospital, Jersey, has rec
been supplied with Shorland's war
ventilating patent Manchester grates
Messrs. E. H. Shorland & Brother, Ltd
Failsworth, Manchester.

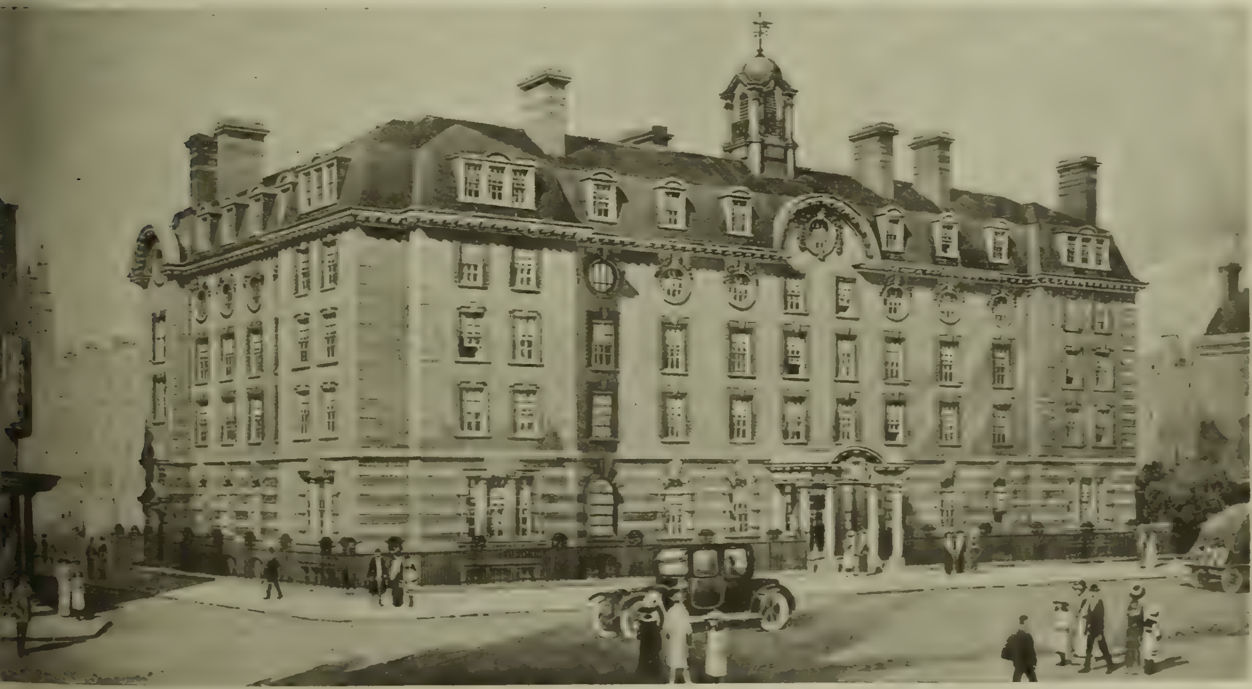
☞ We are informed that 300,000 to 40
yards of concrete hutments, etc., for the
Department and the Admiralty have
treated with Ironite, in addition to se
large reservoirs. Ironite flooring is also
used largely in munition factories.



The Old Mill, Frimley, Surrey. Mr. H. Reginald Poulter, Architect. (R.A. Exhibition, 1916.)

UTFORD HOUSE, W.

building, which is shown in this year's cademy, will shortly be opened as a al club for educated women workers. uated at the corner of Brown-street tford-place, W., and will give accom- n as follows :—In the basement, a large om and kitchen, scullery, and offices g. On this floor there is also the hall, laundry despatch-room, heating , coals, and cycle stores. A sewing- undry, and drying chamber for the use esidents have been arranged, together rge boxroom and lavatory accommoda- both residents and staff. There are service lifts from the servery and laundry despatch-room to the upper floors. On the ground floor, directly opposite the main entrance is the lounge, with windows overlooking and having an entrance into the garden. A library has been arranged to the right of the main entrance, and on the left there is a large social or drawing room, which will be used for dances, concerts, etc. A door from this room leads out to the garden. There has also been provided on this floor the office and the waiting-room, matron's sitting-room, and two private reception-rooms, also lavatories, cloak-room, and service-room. There are twenty-seven bedrooms on the first, second, and third floors and twenty-six on the fourth floor, giving a total accommodation for ninety-seven residents after deducting ten bedrooms for the staff, the servants' bedrooms having been arranged on the fourth floor. The building is heated by a low-pressure hot-water system, supplemented by fireplaces in the principal rooms and some of the bedrooms. Each bedroom has a small wall radiator. The artificial lighting of the building is by electric light, and the latest types of gas-cooking apparatus have been installed in the kitchen by the Gas Light and Coke Company. The building has been designed by Mr. V. Wilkins, architect, 12, York-buildings, Adelphi, W.C., and Messrs. Walter Lawrence & Son, of 19, Finsbury-square, E.C., are the contractors.



Nutford House, Brown-Street, W. Mr. Victor Wilkins, Architect. (R.A. Exhibition, 1916.)

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) a advertised in this number**: Competitions, —; Contracts, —; Public Appointments, —; Auction Sales, xxxiv. Cert conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not b themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be m for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those will to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while ev endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MAY 5.—**Newlyn.**—PAINTING, ETC.—For the painting and decorating of the Newlyn Primitive Methodist Chapel. Particulars of Mr. James White, Secretary to Trustees, Alma House, Newlyn, W.

MAY 10.—**Westhoughton.**—WORKMEN'S DWELLINGS.—For the erection of forty-one workmen's dwellings, to be erected off Church-street and Lord-street, Westhoughton, for the U.D.C. Plans, etc., may be seen and forms of tender obtained from Mr. G. Heyes, Engineer and Surveyor to the Council, Town Hall, Westhoughton.

MAY 11.—**West Looe.**—ROOF RENEWAL.—For the renewal of the roof of St. Nicholas Church, West Looe. Drawings, etc., can be seen at the offices of the architects, Messrs. Sedding & Stallybrass, Queen Anne-terrace, Plymouth; or at Mr. A. E. Hurford's office, Fore-street, East Looe.

MAY 15.—**Carlisle.**—ALTERATIONS.—For alterations to porter's lodge, Fusehill House, for the Carlisle B.G. Plans, etc., from Mr. George Armstrong, architect, 24, Bank-street.

MAY 16. — **Brighton.** — PAINTING, ETC. — For painting, distempering, and tarring the external parts of the Warren Farm Schools, farm buildings, cottages, etc., for the Guardians. Specification, etc., of Mr. Horace Burfield, Clerk to the Guardians, Parochial Offices, Brighton.

MAY 16.—**Rochester.**—ADDITIONS.—For certain additions to the fire station, the Common, for the Corporation. Plans and specifications can be seen, and forms of tender obtained, on application to Mr. William Banks, A.M.Inst.C.E., City Surveyor, Guildhall, Rochester.

MAY 16 — **Warrington.** — EXTENSIONS. — The Electricity and Tramways Committee invite tenders for extension of buildings. Specification, etc., of Mr. S. P. Silcock, architect, 6, Egypt-street, Warrington, where drawings may be seen.

MAY 17.—**London.**—PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for painting and repairing works at the following institutions: (1) Leavesden Asylum, near King's Langley, Herts; (2) North-Western Fever Hospital, Lawn-road, Hampstead, N.W. Specifications, etc., by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief, may be inspected at the office of the Board, Embankment, E.C., and can be obtained upon payment of a deposit of £1 in respect of each work.

NO DATE. — **Garmouth.**—PAINTING, ETC.—For painting and papering Greenfield House, Garmouth. Particulars of Mr. John Smith, Bank Agent, Garmouth.

NO DATE.—**Otley.**—SHEDS.—For the erection of new sheds, Otley Mills, for Messrs. Duncan Barraclough & Co. Names to Mr. J. H. Wall, architect, 3, Manor-square, Otley.

FURNITURE, MATERIALS, etc.

MAY 8.—**Walsall.**—MATERIALS.—Supply to the T.C. for a period of twelve months of builders' materials. Forms of tender from Mr. John Taylor, Borough Surveyor, The Council House.

MAY 9.—**Richmond (Surrey).**—LIME.—Supply to the Richmond Main Sewerage Board during the year ending May 31, 1917, of lime. Specifications, etc., of Mr. William Farley, M.Inst.C.E., Engineer to the Board, West Hall-road, Kew Gardens.

MAY 10.—**Annan.**—FURNISHINGS.—The Board of Directors of Annan Combination Hospital invite tenders for furniture, etc., required for new enteric ward block of the above hospital. Copies of specifications, etc,. from the subscriber, Mr. David A. Knox, Clerk to the Board, Annan.

MAY 13.—**Kingston-on-Thames.**—MATERIALS.—Supply to the Corporation, for the year ending June 30, 1917, of builders' materials. Forms of tender of Mr. Harold A. Winser, Town Clerk, Municipal Offices, Kingston-upon-Thames.

MAY 16. — **Bradford.**—MATERIALS.—Supply to the Cleansing and Team Labour Committee of the Corporation of builders' materials during the year ending June 30, 1917. Forms of tender, etc., of Superintendent Call at the Hammerton-street Depôt.

ENGINEERING, IRON, AND STEEL.

MAY 8.—**Salford.**—STEAM PIPES, ETC.—For high-pressure steel steam pipes and separator; also for cast-iron pipes and valves, for the Electricity Department. Specifications, etc., from the Borough Electrical Engineer, Electricity Works, Frederick-road, Salford.

MAY 8.—**Weymouth.**—STEAM BOILER.—For the supplying and fixing of a 6-h.p. steam boiler, complete with all fittings, and for sundry work incidental thereto, at Weymouth Union. Specifications of Mr. H. A. G. Stevens, Clerk, Bank-chambers, Weymouth.

ROAD, SANITARY, AND WATER WORKS.

MAY 6.—**Greetland.**—SETTS.—Supply to the U.D.C. of best 7-in. Lanc. setts. Mr. F. J. Mallinson, Surveyor, Council Offices, Greetland, Yorks.

MAY 8. — **Feltham.** — TAR. — Supply to the U.D.C. of about 3,000 gallons of refined tar. Mr. Harold Dale, Clerk to the Council, Town Hall-chambers, Feltham.

MAY 8.—**Warrington.**—REPAIRS TO DRYER.—The Sanitary Works Committee invite tenders for repairs to a steam-jacketed dryer. Particulars from Mr. R. Wilson, Manager, Longford Depôt, Warrington.

MAY 9.—**Horncastle.**—MATERIAL.—Supply to the U.D.C. of road material. Forms of tender from Mr. R. W. Clitherow, Clerk to the Council, Court House, Horncastle.

MAY 9.—**Markham Village (nr. Hollybush).**—SEWER, ETC.—The Bedwellty U.D.C. invite tenders for constructing about 175 lineal yds. of 9-in. diameter sewer and surface-water drain at Markham Village, nr. Hollybush. Drawing, etc., may be seen, and form of tender and bill of quantities obtained, of Mr. Dan H. Price, Surveyor to the Council, Aberbargoed.

MAY 10.—**Dumbartonshire.**—METAL, ETC.—For metal and binding supplies for one year from Whit Sunday, 1916, for roads in the district comprising the parishes of West Kilpatrick, East Kilpatrick, Kirkintilloch, and Cumbernauld. Copies of the specification from the Surveyor, Mr. James Andrew, at his office, County-buildings, Dumbarton.

MAY 15. — **Plomesgate.**—HAULAGE, ET motor haulage or carting road material other team work for the R.D.C. Fo tender of Mr. David R. Read, Clerk.

MAY 18.—**Haverhill.**—FILTER TANKS, ET Guardians of the Risbridge Union invite for certain works in connection with t vision of filter tanks and sprinkler for th age works at Kedington Institution, near hill, Suffolk. Plans and specifications, E. E. Oakes, Clare, Suffolk, can be seen Kedington Institution, or a copy of th and specifications will be sent on receip to cover cost.

MAY 24.—**Middlewich.**—MATERIALS, ET supplying to the U.D.C. of road materia also for paving, steam rolling, team labo nightsoil removal, for the year ending, J 1917. Tender forms from the Council's S or Sanitary Inspector, Town Hall, Middl

NO DATE.—**Blandford Forum (Dorset** SPRAYING, ETC.—For the tar spraying and of about 25,000 yds. super. of main and oth surfaces for the Corporation. Particular Mr. Richard Lake, Borough Surveyor.

Auction Sales.

* MAY 10.—Messrs. Churchill & Si sell by auction, at the Great Hall, Wi House, Old Broad-street, E.C., an ass of deals, battens, boards, timbers, etc.

* MAY 16.—**Hampstead.**—Messrs. J. T. ing & Co. will sell by auction, on the pr the stock and plant of a builders' merch

NEW COMPANIES.

THE undermentioned particulars o companies recently registered are take the Daily Register compiled by Messrs. & Sons, Ltd., Company Registration Chancery-lane, W.C. :—

E. W. BLAKE & Co., LTD. (14 Registered April 20. To acquire and on business of consulting and general en carried on as E. W. Blake & Co., at 5, Fen street, E.C., contractors, builders, ir steel converters, founders, etc., c merchants, etc. Nominal capital, £1, 1,000 £1 shares.

WELLINGTON MILL (MIRFIELD), (143,587). Registered April 12. To p or otherwise acquire a piece of land kn the "Wellington Mill," Mirfield, Yorks build, etc., mills, factories, offices, et carry on business of builders, architects and estate agents, brick and tile make Nominal capital, £7,000 in 7,000 £1 shar

.PARKVILLE, LTD. (143,595). Re April 13. To purchase or otherwise manage, etc., and deal in real or p property of all kinds, and in particular buildings, ground rents, business co securities, etc., and take over lands situate near "Bason's-lane, O Worcestershire," and carry on busi builders, contractors, painters, negotiat dealers in builders' requisites of all Nominal capital, £10,000 in 10,000 £1 s

[Thóse with an asterisk (*) are advertised in this issue.]

ES CURRENT OF MATERIALS.

g to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

our last issue copper and brass and white and red advanced, and turps have been reduced.—Ed.

aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest t. Quality and quantity obviously affect prices which should be remembered by those who e of this information.

BRICKS, &c.

.000 Alongside, in River Thames.	£	s.	d.
ks	2	0	0
tocks for Facings	2	12	0

1,000, Delivered at Railway Depot, London.

	£	s.	d.		£	s.	d.
......	1	10	0	Best Blue Pressed Staffordshire ..	5	0	0
reham	3	12	0	Do. Bullnose ..	5	5	0
i Pressed n Facing	5	5	0	Best Stourbridge Fire Bricks ..	4	15	0
Bricks— White,				D'ble Str'tch rs	18	17	6
and				Double Headers	15	17	6
Glazed hers ..	13	7	6	One Side and two Ends	19	17	6
......	12	17	6	Two Sides and one End	20	17	6
Bullnose 4½ in.	16	17	6	Splays and Squints	18	7	6

econd Quality £1 per 1,000 less than best.

	s.	d.	
Ballast	8	3	per yard, delivered.
and Pit Sand	8	6	,, ,, ,,
shed Sand	9	6	,, ,, ,,

Per ton, delivered.

	£	s.	d.	£	s.	d.
tland Cement	2	5	0	2	8	0

2 1s. alongside in 80-ton lots.
te 2s. 6d. per ton extra on above.
ound Blue Lias Lime.... 1 5 6 at rly. depôt.
-The cement or lime is exclusive of the ordinary charge for sacks.
one Lime .... 18s. 0d. per yard delivered.
dge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
tone — delivered in railway trucks at ourne Park, Paddington, G.W.R., or Lambeth, G.W.R., per ft. cube	1	7
delivered in railway trucks at Nine L. & S.W.R., per ft. cube............	1	8¼
delivered on road waggons at Nine Elms	1	9¼

nd Stone—

	s.	d.
n Whitbed, in random blocks of 20 ft. rage, delivered in railway trucks at stbourne Park, G.W.R., South Lambeth, V.R., or Nine Elms, or L. & S.W.R. per ft. e	2	5½
o. delivered on road waggons at Pimlico arf or Nine Elms Depôt, per ft. cube ..	2	6½

e Basebed, 2d. per ft. cube extra.

m Blocks—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
r in blocks ..	2	0	Closeburn Red Freestone	2	2
blocks	1	7¼	Red and White Mansfield Random block	2	9
l in blocks	2	4			
Dale in s	2	5	Yellow Magnesian Limestone do. do.	3	3

tone—*Robin Hood Quality.*

	s.	d.
Ft. Cube, Delivered at Railway Depôt.		
d random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
awn two sides landings to sizes (under super.)	2	5
bbed two sides ditto, ditto	2	8
wn two sides slabs (random sizes)	1	0½
2½ in. sawn one side slabs (random sizes)..	0	8½
2 in. ditto, ditto	0	6½

ork—

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
d random blocks	3	0
Per Ft. Super, Delivered at Railway Depôt.		
wn two sides landing to sizes (under 40 ft. .)	2	3
bbed two sides ditto	2	7
wn two sides slabs (random sizes)	1	0
f-faced random flags	0	5

TILES.

Per 1,000 f.o.r. London.

achine-made tiles or hand-made sand-tiles from either Broseley or	£	s.	d.
ordshire district	2	12	6
ental ditto	2	15	0
d valley tiles (per dozen)	0	5	6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

		£	s.	d.
ue Bangor slates,	20 by 10	11	16	0
uality ,,	,, ...	11	10	0
,,	16 by 8	5	15	0
ue Portmadoc,	20 by 10	11	13	6
uality ,,	,, ...	11	3	6
,,	16 by 8	5	15	0

WOOD.

per prices should be confirmed, as the market is *changing daily.*

Building Redwood.

Imported sizes. Per standard.

	£	s.	d.	£	s.	d.
4 in. by 12 in., 4 in. 11 in., 3 in. by 11 in., in. by 9 in., and 2 in. 11 in.	33	10	0	34	10	0

WOOD (*Continued*).

Best Building Redwood. Per standard.

	£	s.	d.	£	s.	d.
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32	10	0	33	10	0
Battens: 2 in., 2½ in., and 3 in. by 8 in. ......; 2 in., 2½ in., and 3 in. by 7 in. ......; 2 in., 2½ in., and 3 in. by 6 in. ......; 2 in., 2½ in., and 3 in. by 5 in. ......; Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. ....; 3 in. by 4 in., and 3 in. by 4½ in.	31	10	0	32	10	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.		
¾ in.	1	0	0	more than battens.		
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.		

Best Middling Dantzic and Memel Fir Timber Logs — Per load of 50 ft. cube.

	£	s.	d.	£	s.	d.
(average specification) ..	10	0	0	—		
Seconds do. do.	9	10	0	—		
9 in. to 10 in. do.	8	10	0	—		
6 in. to 8 in. do.	8	0	0	—		

Stocks very limited.

	£	s.	d.	£	s.	d.
Sawn pitch pine logs (about 35 cu. ft. average)	12	0	0	13	10	0
Do. 6 in. to 10 in.	10	0	0	11	0	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	10	0	7	0	0

Per standard.

	£	s.	d.	£	s.	d.
Best Pitch Pine Deals	34	0	0	35	0	0
Under 2 in. thick	0	10	0	extra.		

Joiners' Wood.

White Sea Second Quality Red:

	£	s.	d.	£	s.	d.
4 in. by 11 in.........	39	0	0	40	0	0
3 in. by 11 in. and 2 in, by 11 in.	38	0	0	39	0	0
4 in. by 9 in.	37	0	0	38	0	0
3 in. by 9 in. and 2½ in. by 9 in.	36	0	0	37	0	0
9 in. by 11 in. boards	1	0	0	more than deals.		
7 in. and 8 in. battens	33	0	0	34	0	0
7 in. and 8 in. boards	1	0	0	more than battens.		
Third quality	2	0	0	less than best.		
Archangel White Deals— Best 3 in. by 9 in. and 10 in. and 11 in.	36	0	0	37	0	0
Seconds, do.	2	0	0	less than best.		
U.S. Battens	30	0	0	32	0	0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

Per square actual.

	£	s.	d.	£	s.	d.
1½ in. by 6½ in. planed and shot	1	16	0	1	19	0
1¼ in. by 6½ in. planed and matched	1	16	6	1	19	6
1 in. by 6½ in. planed and shot	1	9	0	1	12	0
1 in. by 6½ in. planed and matched	1	9	6	1	12	6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1	4	0	1	6	0
1 in. by 6½ in. do.	1	10	6	1	12	0
⅝ in. by 6½ in. do.	1	0	0	1	1	0

Per standard.

	£	s.	d.	£	s.	d.
Columbian or Oregon Pine, best quality	42	0	0	44	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.		
Oddments	39	0	0	,,		
Seconds, regular sizes ..	43	10	0	,,		
Oddments	37	10	0	,,		
Kauri Pine—Planks per ft. cube	0	8	0	—		
Wainscot Oak Logs, per ft. cube	0	10	6	0	12	6
Dry Wainscot Oak, per ft. super., as inch	0	1	0	0	1	3
¾ in. do. no...	0	0	10	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch	0	1	0	0	1	4
Selected, Figury, per ft. super., as inch	0	1	6	0	2	6
Cuba Mahogany	0	1	6	0	2	6
Dry Walnut, American, per super., as inch	0	1	0	upwards. 0	1	3
French, "Italian," Walnut..	0	1	0	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	34	0	0
Do. do. (Java)	25	0	0	27	0	0
American Whitewood planks, per ft. cube	0	6	6	0	7	6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£	s.	d.	£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	0	0	21	0	0
Plain Compound Girders, ordinary Sections	22	0	0	23	0	0
Plain Compound Stanchions..	23	0	0	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	21	10	0
Flitch Plates	20	10	0	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	14	0	0

Turning extra.

METALS (*Continued*).

Per ton, in London.

Iron—	£	s.	d.	£	s.	d.
Common Bars	16	0	0	—		
Staffordshire Crown Bars, good merchant quality ..	16	0	0	17	0	0
Staffordshire "Marked Bars"	17	10	0	18	0	0
Mild Steel Bars	18	0	0	18	10	0

Steel Bars, Ferro-Concrete quality, £18 basis price.

	£	s.	d.	£	s.	d.
Hoop Iron, basis price	19	10	0	20	0	0
,, ,, Galvanised	30	0	0			

(*And upwards, according to size and gauge.)

Sheet Iron Black—

	£	s.	d.	£	s.	d.
Ordinary sizes to 20 g.	19	10	0	20	0	0
,, ,, 24 g.	20	10	0	21	0	0
,, ,, 26 g.	21	10	0	22	0	0

Sheet Iron, Galvanised flat, ordinary quality—

	£	s.	d.	£	s.	d.
Ordinary sizes. 6 ft. by 2 ft. to 3 ft. to 20 g.	30	0	0	—		
Ordinary sizes to 22 g. and 24 g.	30	10	0	—		
Ordinary sizes to 26 g.	33	0	0	—		

Sheet Iron, Galvanised, flat, best quality—

	£	s.	d.	£	s.	d.
Ordinary sizes to 20 g.	31	0	0	—		
,, ,, 22 g. and 24 g.	31	10	0	—		
Ordinary sizes to 26 g.	34	10	0	—		

Galvanised Corrugated Sheets—

	£	s.	d.	£	s.	d.
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29	0	0	—		
Ordinary sizes, 22 g. & 24 g.	29	10	0	—		
Ordinary sizes, 26 g.	30	0	0	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20	10	0	—		
Best Soft Steel Sheets, 22 g. and 24 g.	20	15	0	—		
Best Soft Steel Sheets, 26 g. ..	22	10	0	—		
Cut Nails, 3 in. to 6 in.	21	10	0	22	0	0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

	£	s.	d.	
Lead—Sheet, English, 4 lb. and up	41	10	0	—
Pipe in coils	42	0	0	—
Soil pipe	45	0	0	—
Compo pipe	45	0	0	—

Note—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.	
Copper—					
Strong Sheet	per lb.	0	1	6	—
Thin ,, ...	,,	0	1	8	—
Copper nails	,,	0	1	6	—
Copper wire	,,	0	1	8	—
Brass—					
Strong Sheet	,,	0	1	6	—
Thin ,, ...	,,	0	1	8	—
Tin—English Ingots ..	,,	0	2	0	—
Solder—Plumbers' ..	,,	0	0	11	—
Tinmen's	,,	0	1	2	—
Blowpipe	,,	0	1	4	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5½d.	26 oz. fourths	6¼d.
,, fourths	4¾d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
$\frac{3}{16}$ Rough rolled and rough cast plate	4¼d.
¼ Rough rolled and rough cast plate	4½d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white..	5d.
Ditto, tinted	6½d.
Rolled Sheet	4½d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	5
,, ,, ,, in barrels	,,	0	3	6
,, ,, ,, in drums	,,	0	3	9
Boiled ,, ,, in barrels	,,	0	3	8
,, ,, ,, in drums	,,	0	4	0
Turpentine in barrels	,,	0	3	10
,, in drums	,,	0	4	1
Genuine Ground English White Lead,	per ton	60	0	0
(In not less than 5 cwt. casks.)				
Red Lead, Dry	per ton	58	0	0
Best Linseed Oil Putty	per cwt.	0	12	0
Stockholm Tar	per barrel	1	12	0
Genuine White Lead Paint— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots	per ton delivered	75	0	0

VARNISHES, &c.

Per gallon.

	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

HIGH WYCOMBE.—Supply of a refuse destructor, for the Town Council :—

Goodrich & Hamlyn*	£1,435

MELTON MOWBRAY.—For fencing at the old sewage works, for the Urban District Council :—

E. Clarke*	£74

NORWICH.—For carrying out repairs to property, for the Corporation :—

Nos. 18 and 19, Victoria-Street.	
Watson & Kirby*	£98
Nos. 26 and 27, Victoria-Street.	
Watson & Kirby*	£95

SELBY.—Accepted by the Urban District Council for the erection of working-class dwellings :—

Thirty-one Houses, Carr's-Terrace.	
J. Ashton, Barton-on-Humber	£7,176
Thirty Houses, Flaxby-Road.	
J. Carr & Son	£7,140

◆

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N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PATENTS.

APPLICATIONS PUBLISHED.*

1,433 of 1915.—Deutsch-Luxemburgische Bergwerksund Hutten-akt.-Hesellschaft: Iron tongue-and-groove piling.

4,756 of 1915.—William Russell Kerr and William Henry Murphy: Devices for reinforcing, or bonding concrete in building construction.

4,770 of 1915.—Richmond Gas Stove and Meter Company, Ltd., and Harold Hartley: Gas-fires.

4,803 of 1915.—William Russell Kerr and William Henry Murphy: Devices for securely fastening two bars or rods at an angle to each other.

4,861 of 1915.—Jacob Joseph Louis Smits: Screens for purifying water.

5,240 of 1915.—Henry Francis Joel: Joints of pipes and couplings applicable to electrical conduit fittings and like purposes.

5,709 of 1915.—Henry Pratt: Household baths.

6,203 of 1915.—George Henry Lang: Locking attachment for bolts and nuts, wheelcaps, and the like.

9,101 of 1915.—British Thomson-Houston Company (General Electric Company): Regulating mechanism for controlling the flow of fluids.

9,109 of 1915.—Sir Robert Abbott Hadfield and William Thomas Ward Miller: Gyratory or other similar crushers and grinders.

9,612 of 1915.—Michael Nethersole: Shutters or gates for weirs, dams, and the like.

10,163 of 1915.—John Irving Kirby: Barless front fittings for domestic firegrates.

10,177 of 1915.—Charles Augustus Carlow: Systems of separation doors for the pit-heads of collieries.

10,258 of 1915.—Thomas Butson: Tool for marking the positions of rivet holes and the like.

13,790 of 1915.—Cecil Stanley Windsor and William Henry Bishop: Ventilators.

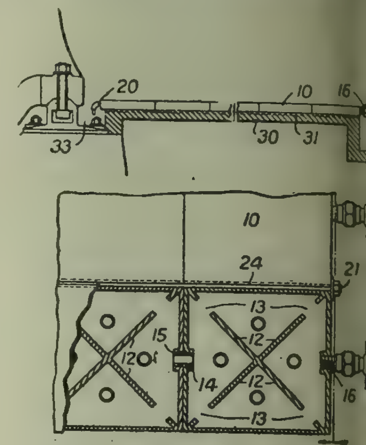
---

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

SELECTED PATENT.

21,328 of 1914.—James Barnard
Tiled floors.

This relates to the formation of a co
floor, for use in rolling-mills, glass-h
and other buildings, of hollow tiles
connected so as to permit of the circulat
a cooling-fluid. Hollow tiles 10 of metal
terra-cotta, or cast-iron have partitio
extending between top and bottom plat
interrupted at 13 so as to form passages f



21,328 of 1914.

circulation of water admitted and disc
through openings 14 connected with
openings in adjacent tiles by tapered bu
15 having a pressed fit. The tiles ar
nected in line to a main supply pipe 18 b
16, and each line discharges by a pipe 20,
than the entry pipe 16, into drained ch
33. The tiles, which are supported on c
30 provided with draining-channels 3
clamped together by bolts 21 carried in
cut parts 24 of the tiles.

◆

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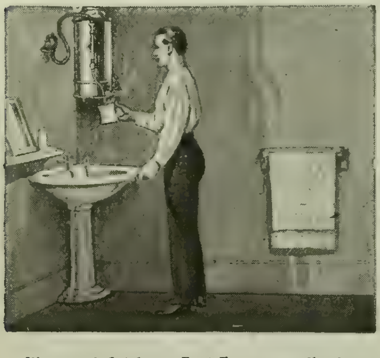

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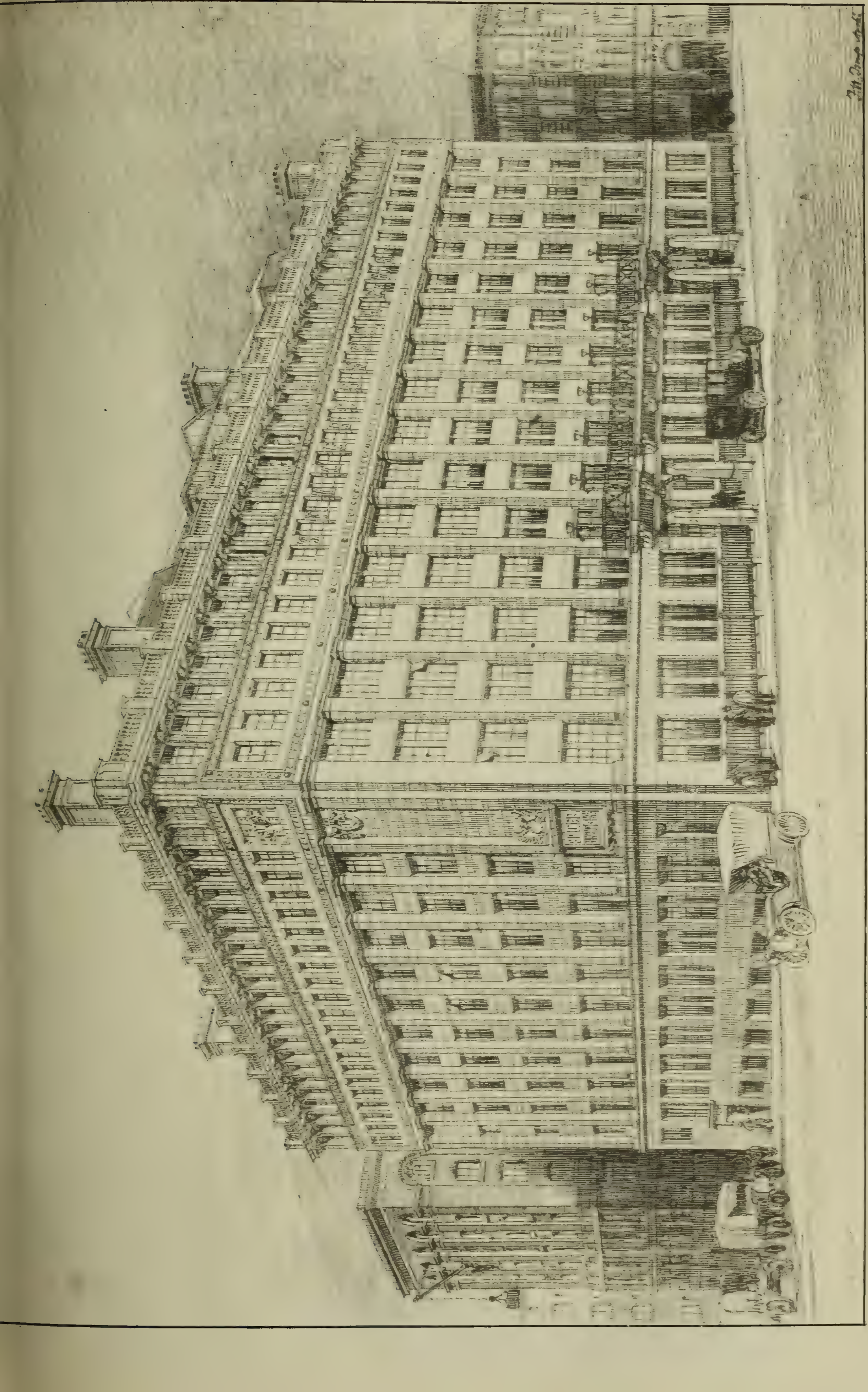
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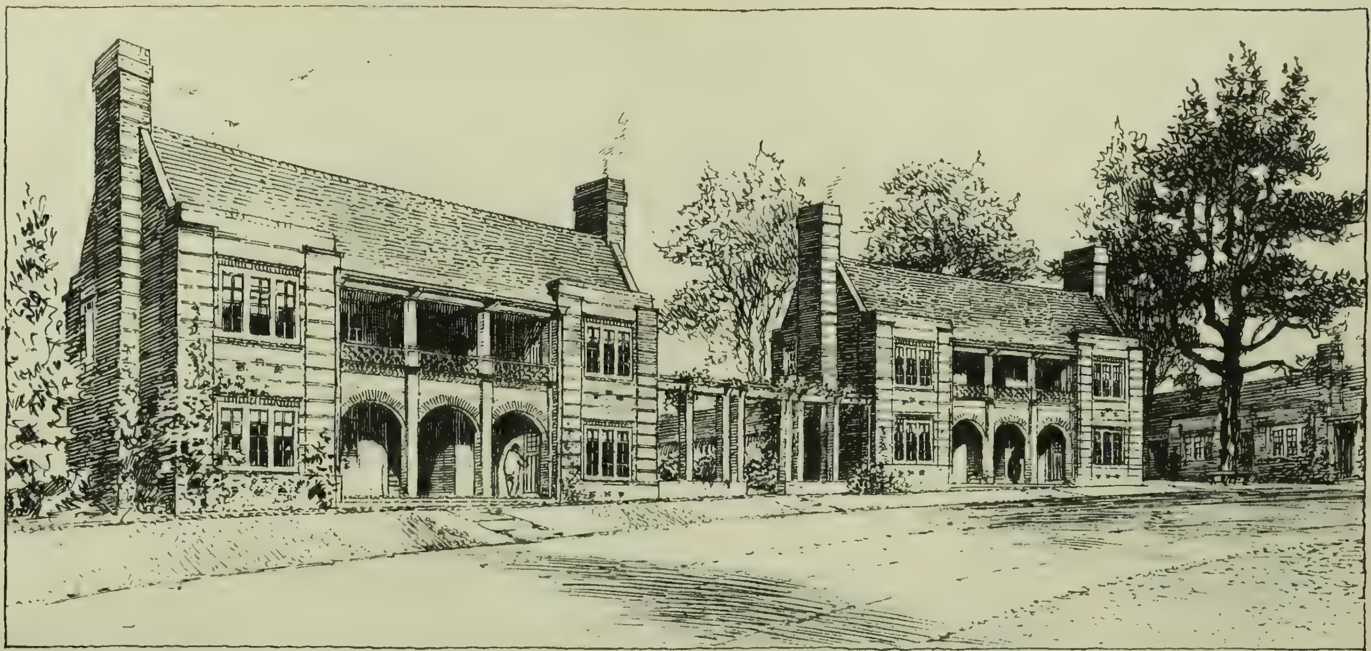

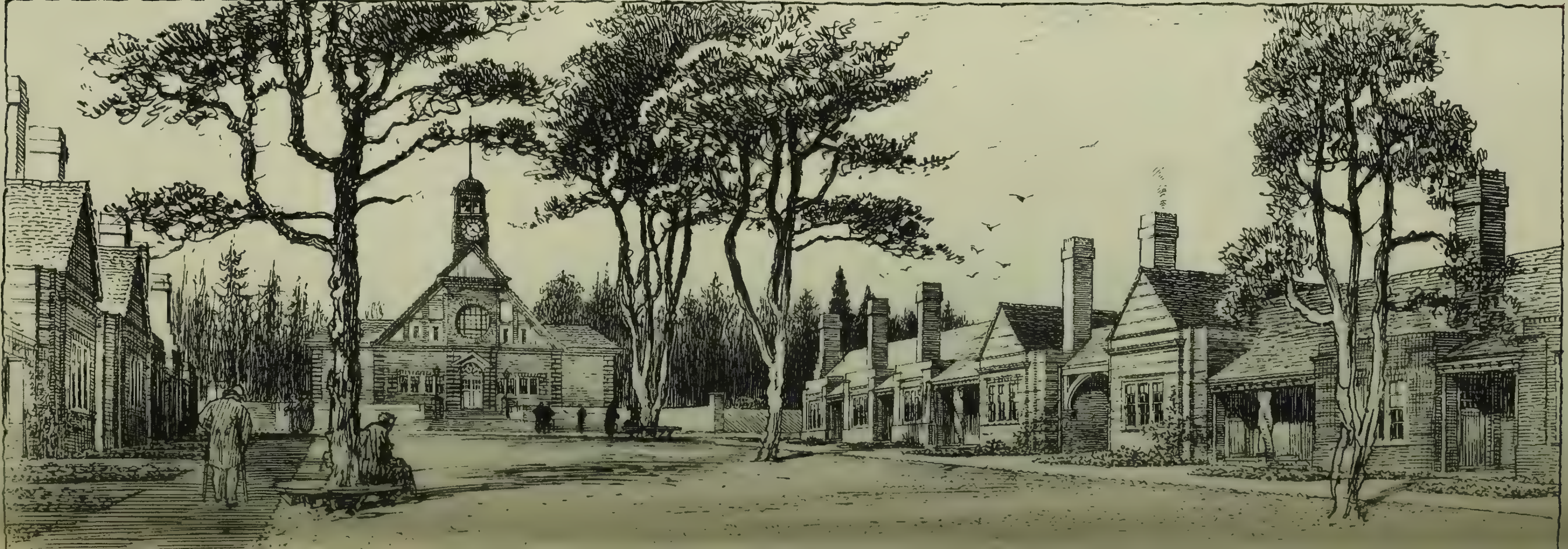

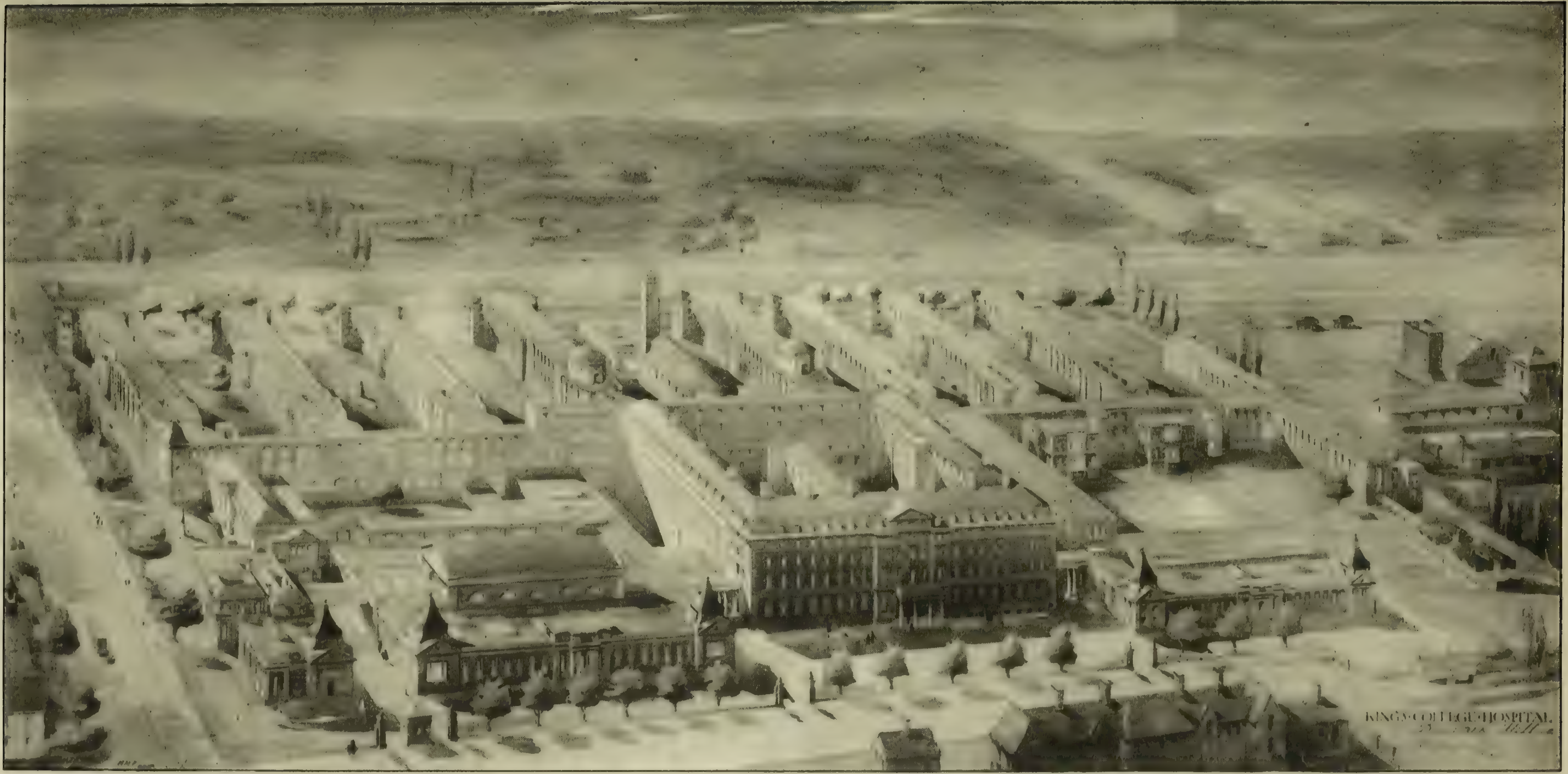

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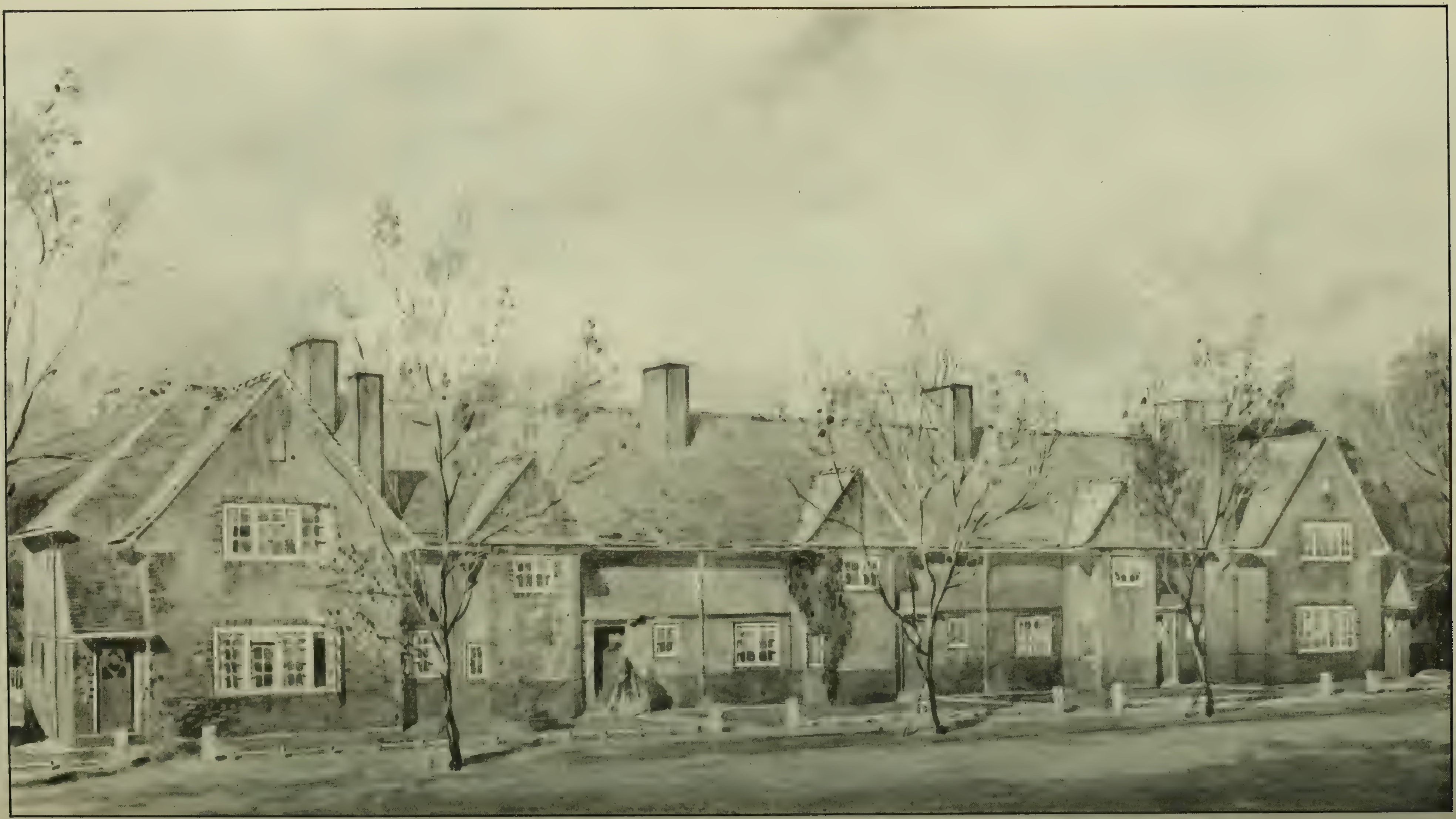

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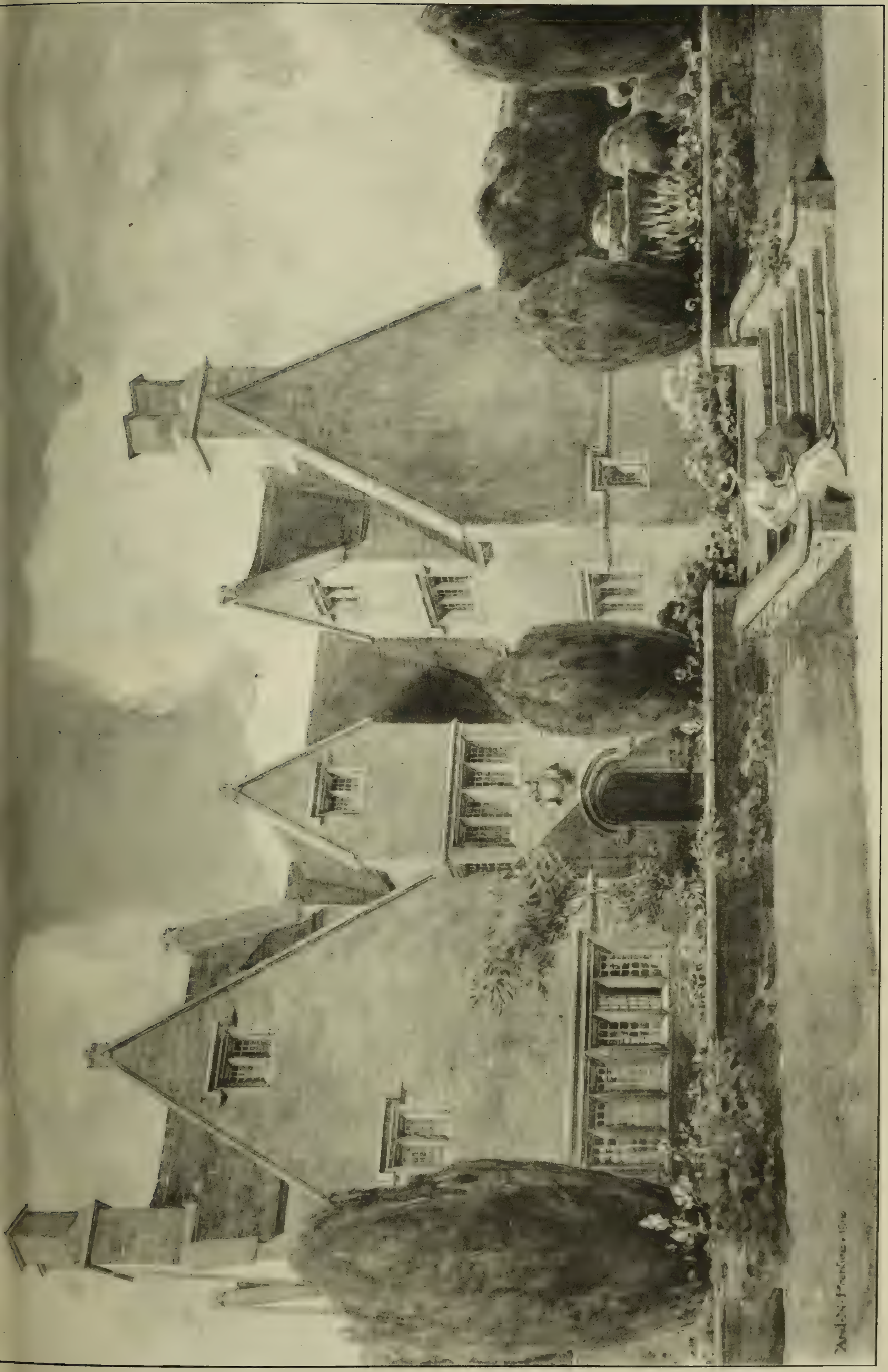

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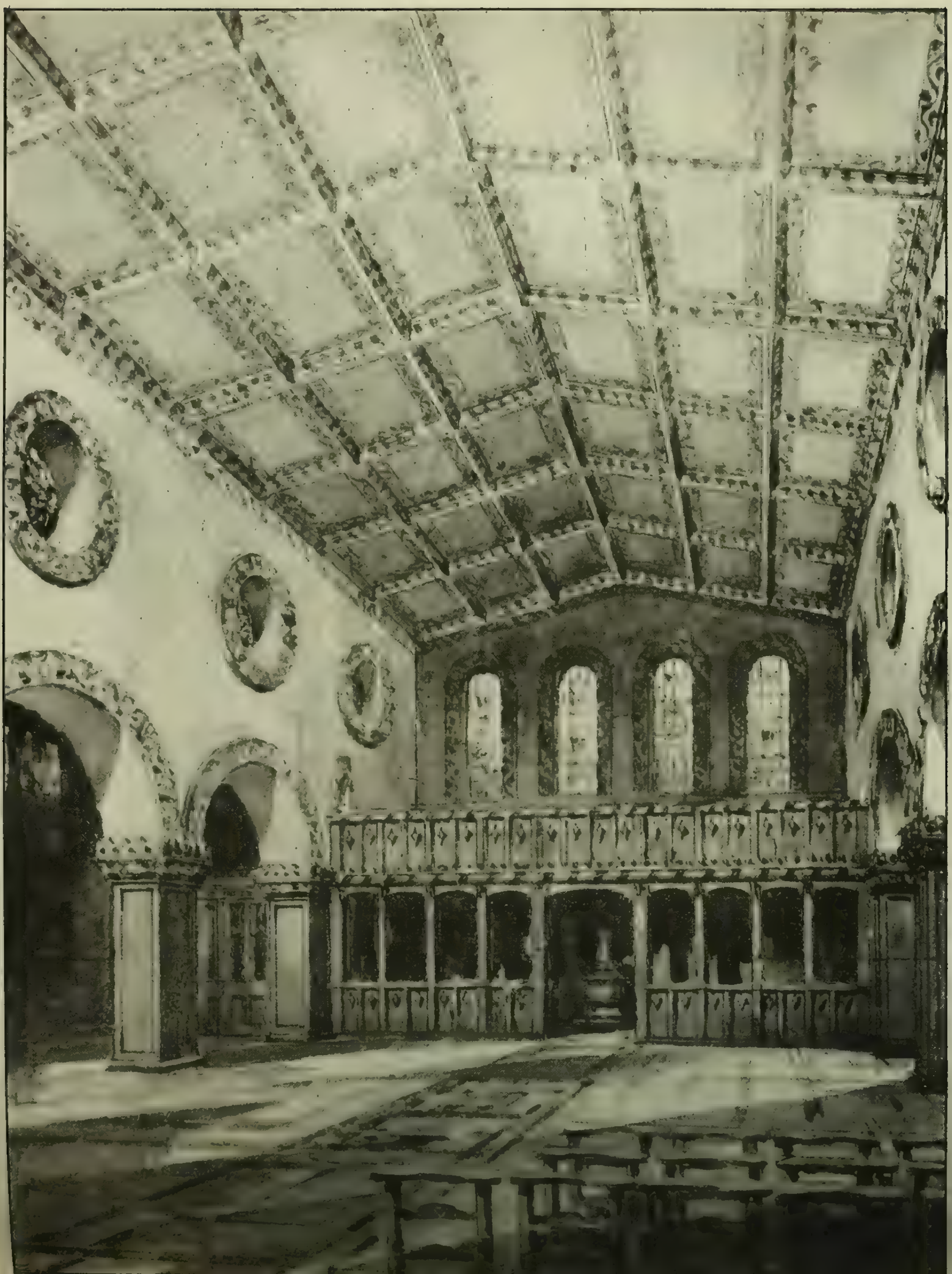

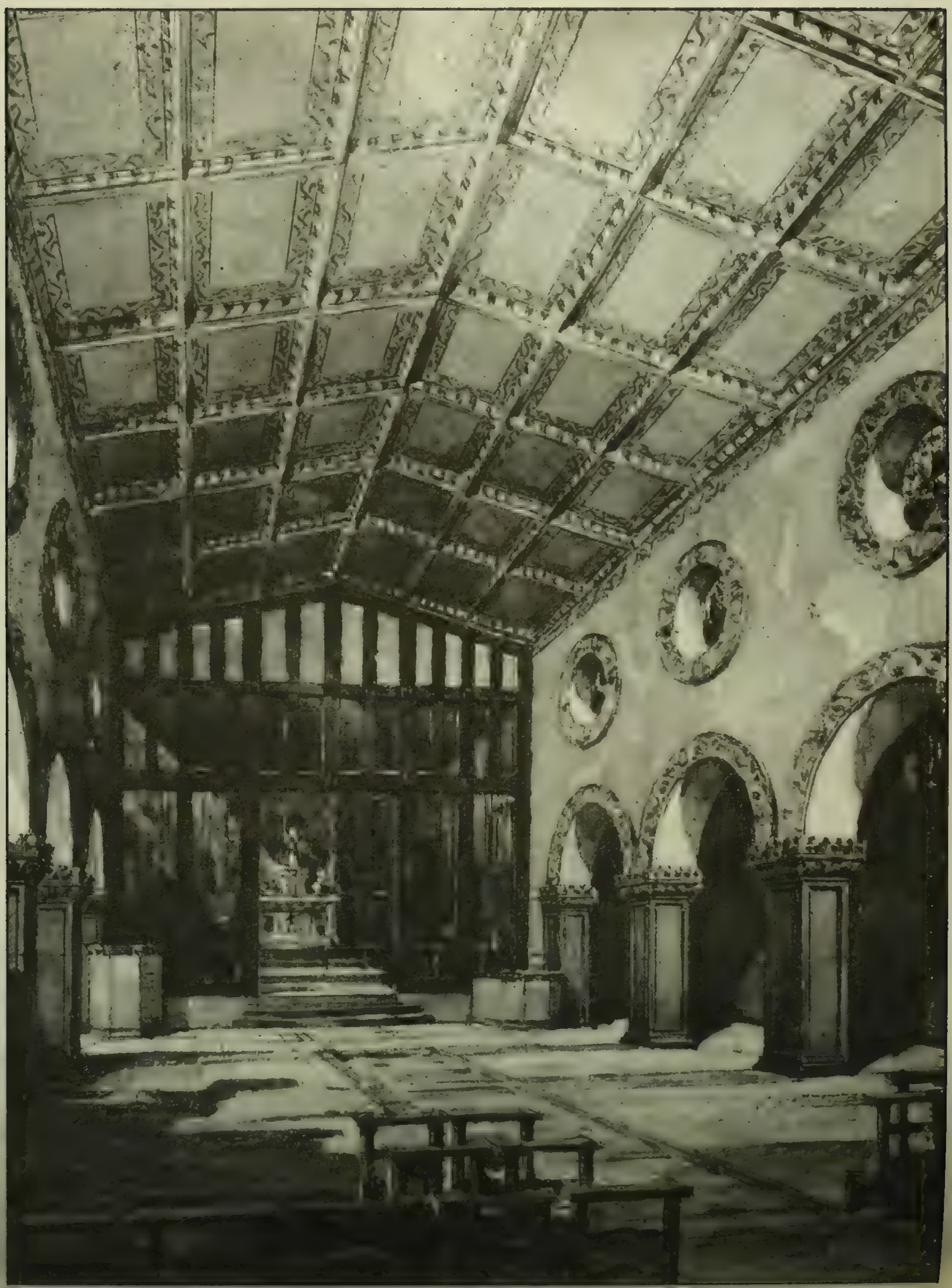

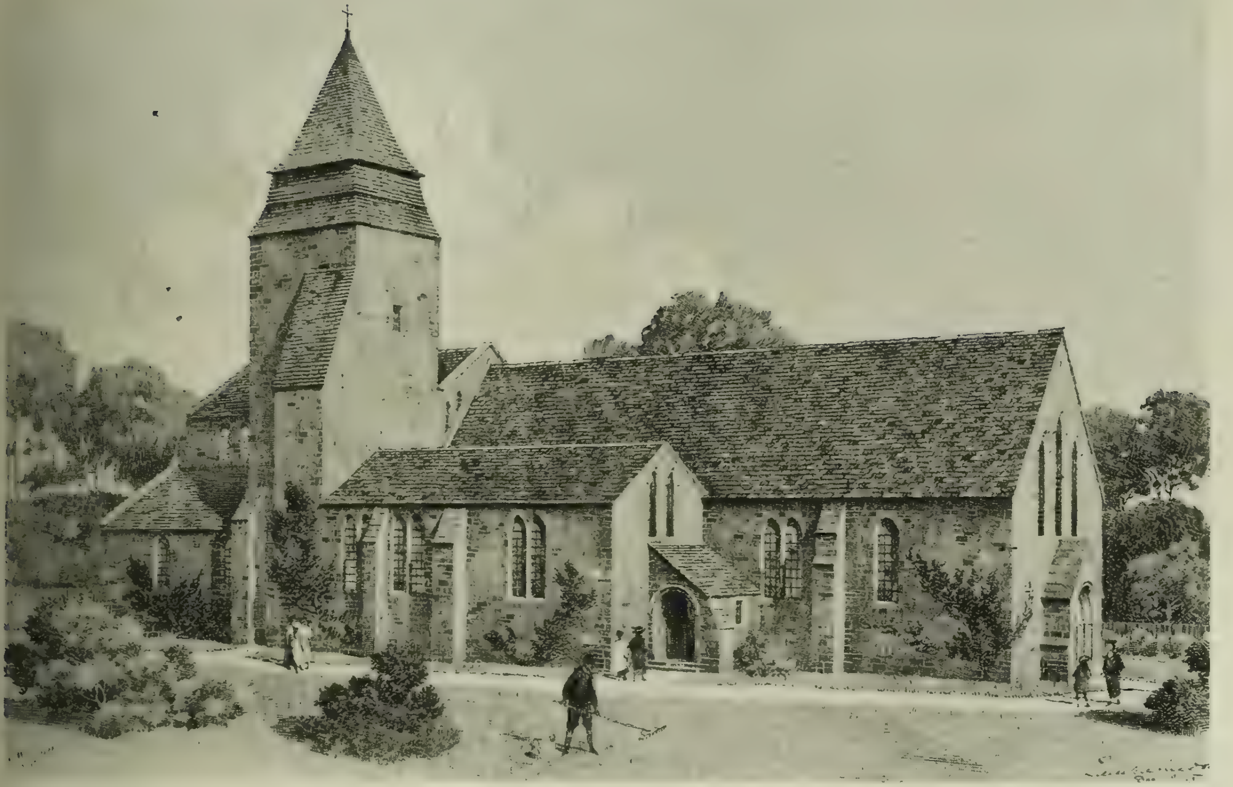

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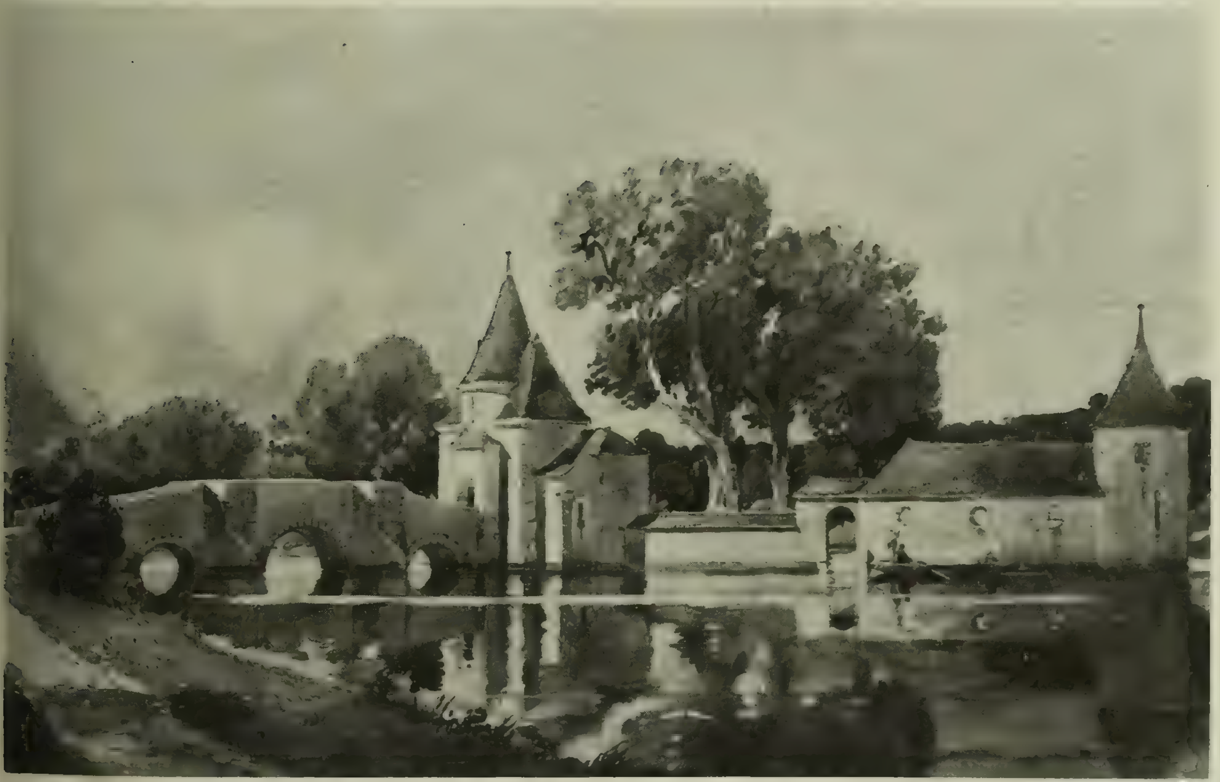

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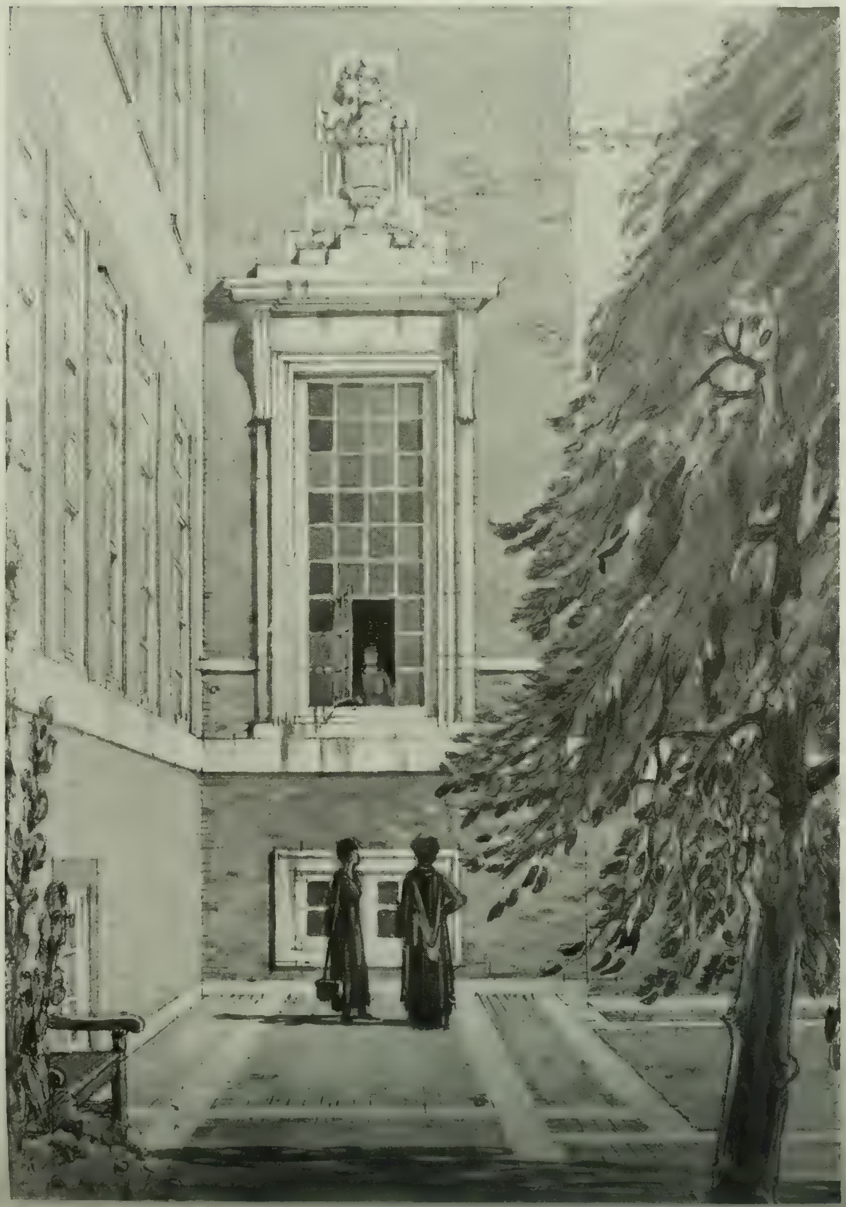

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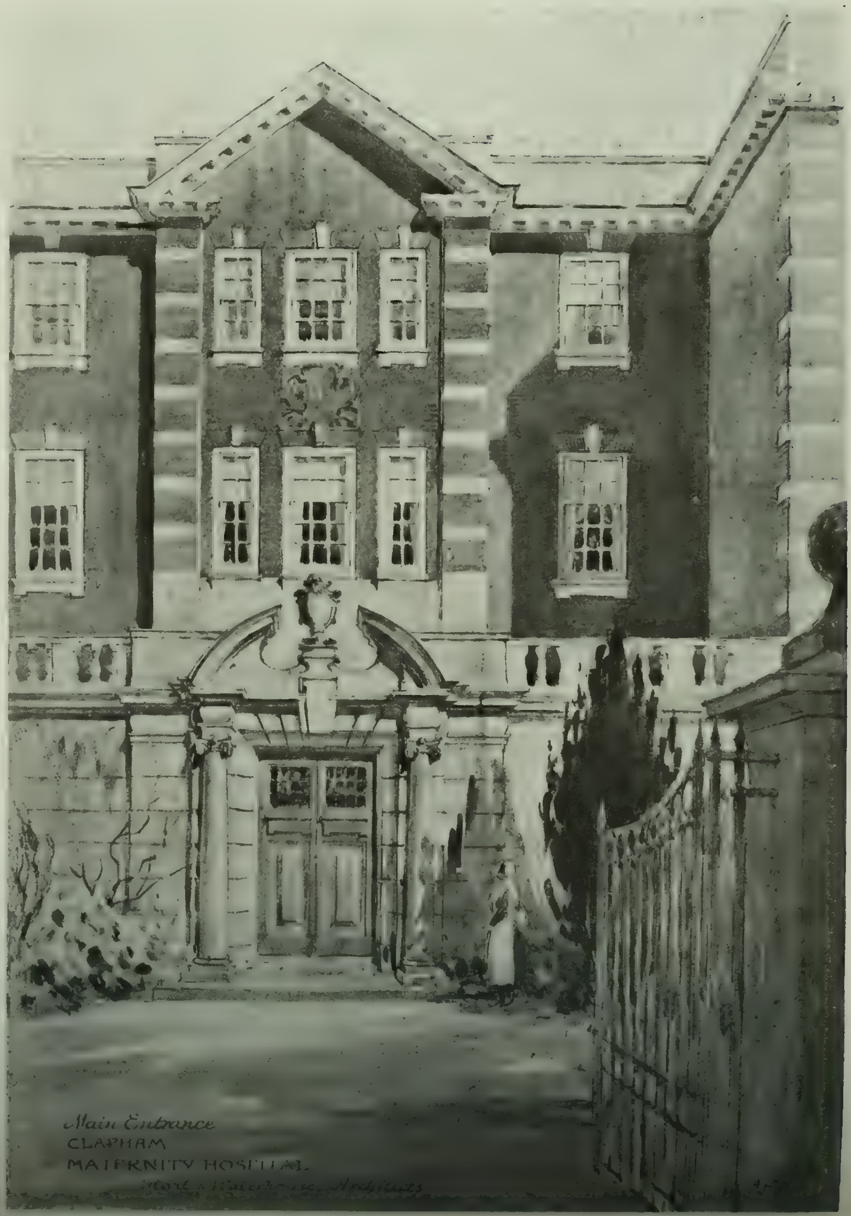

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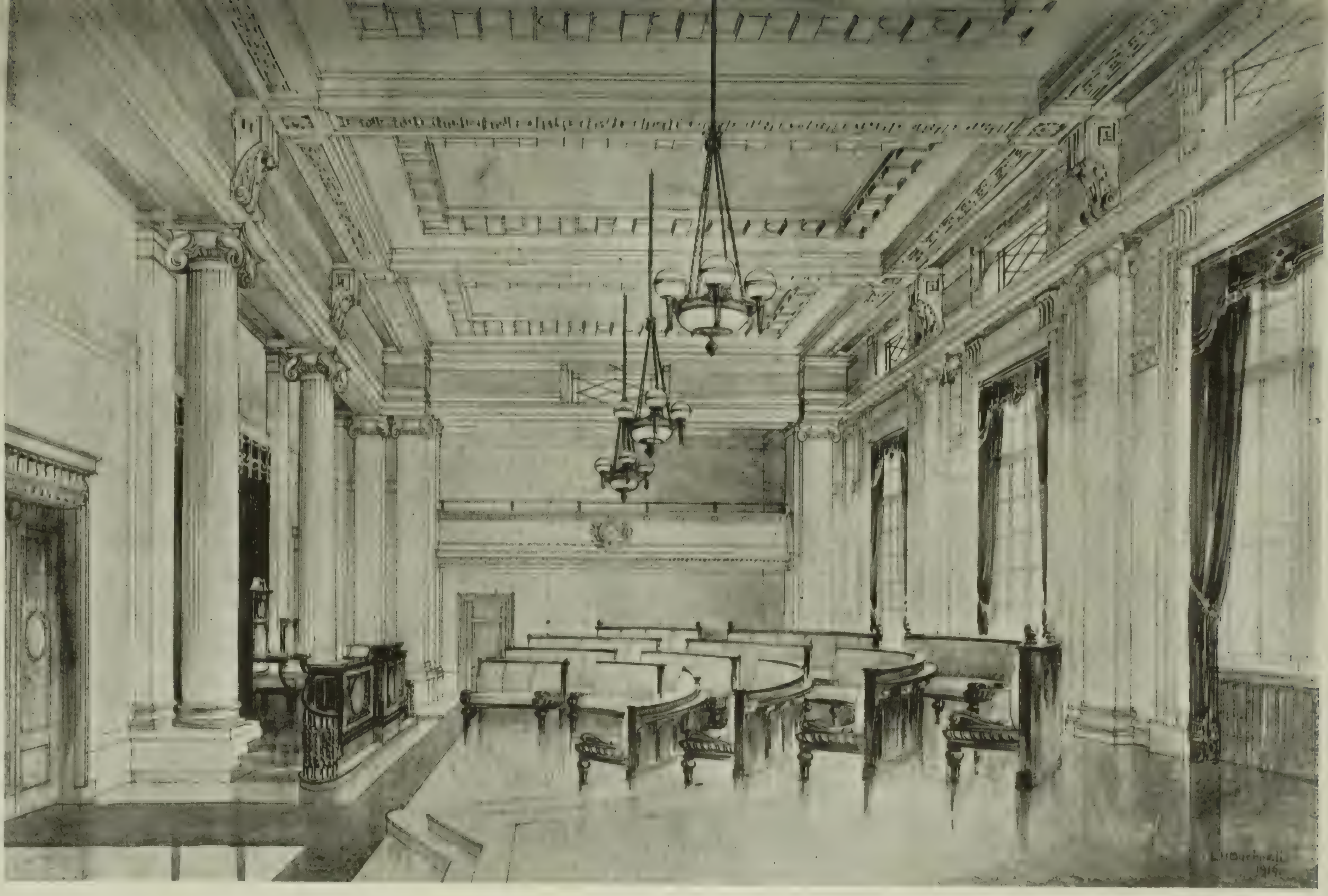

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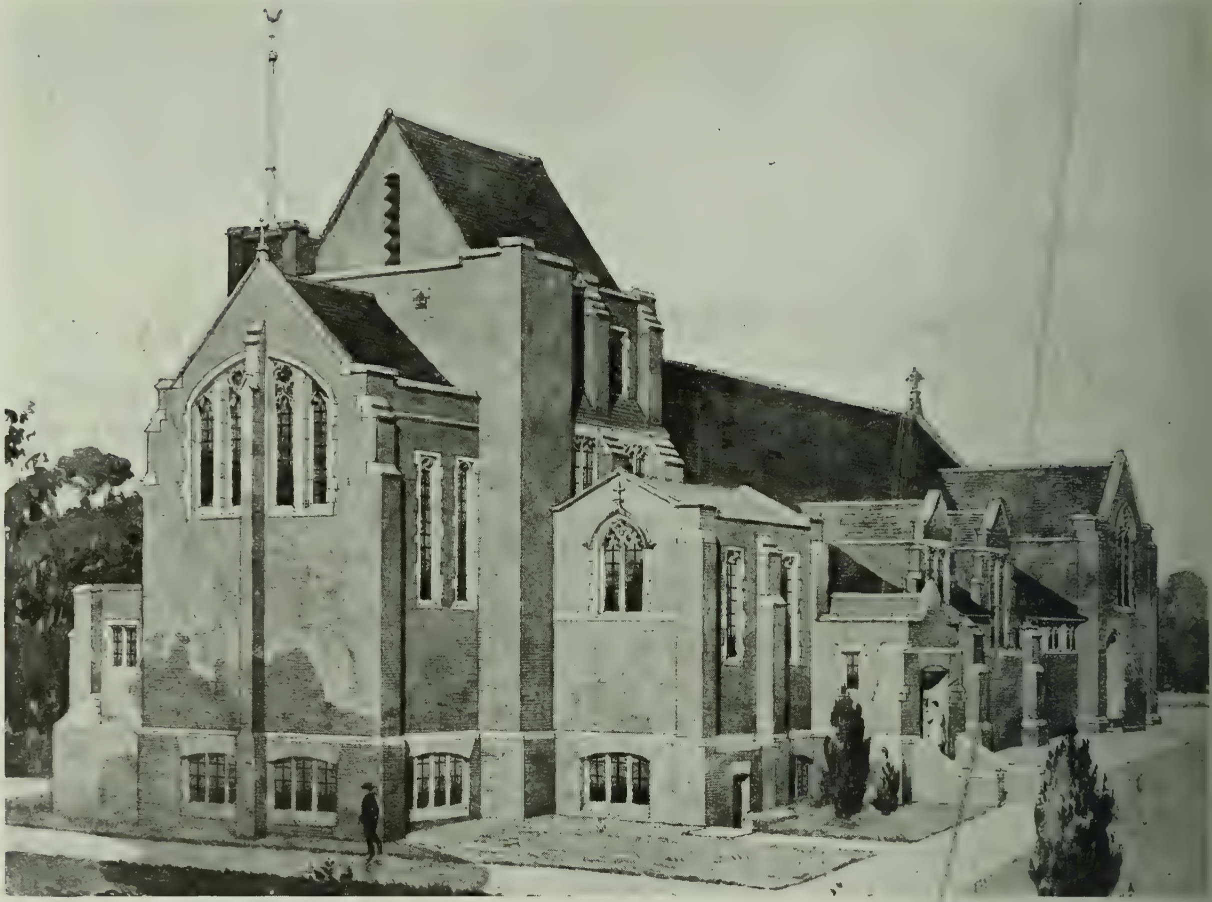

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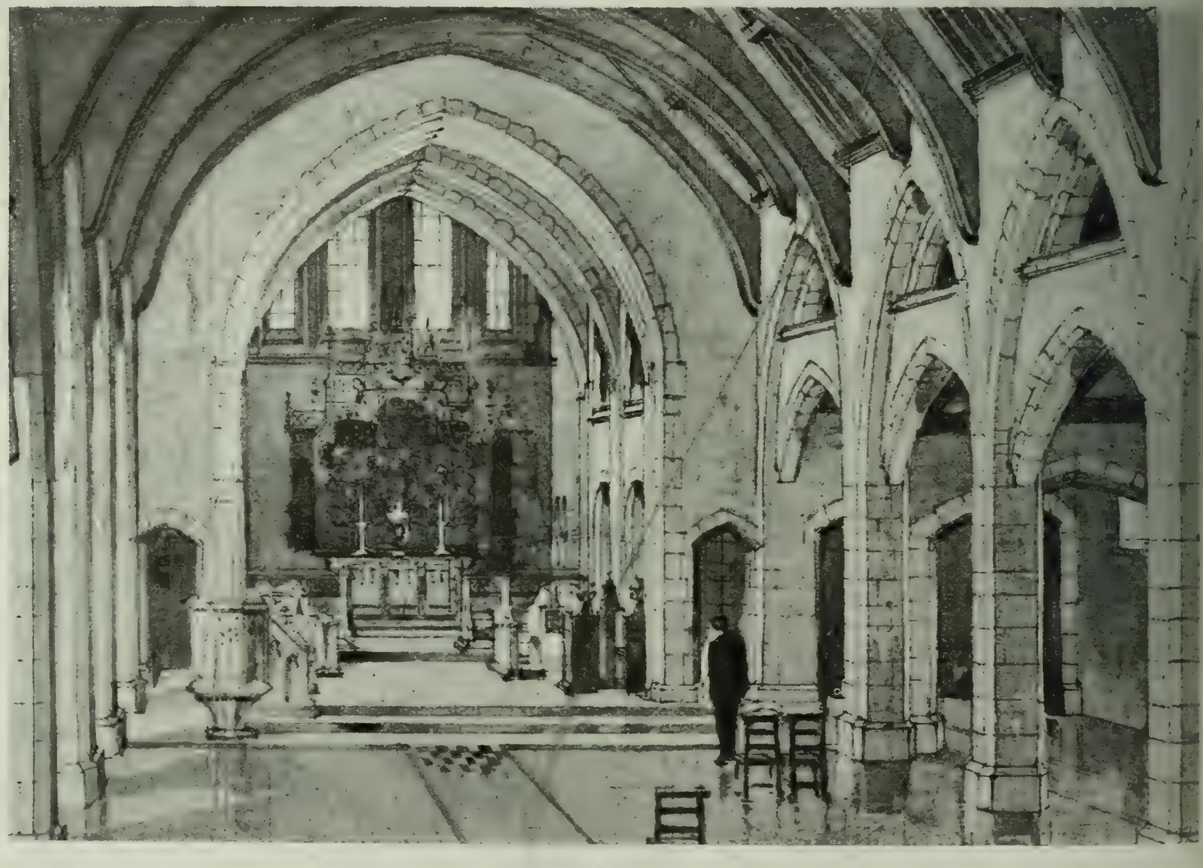
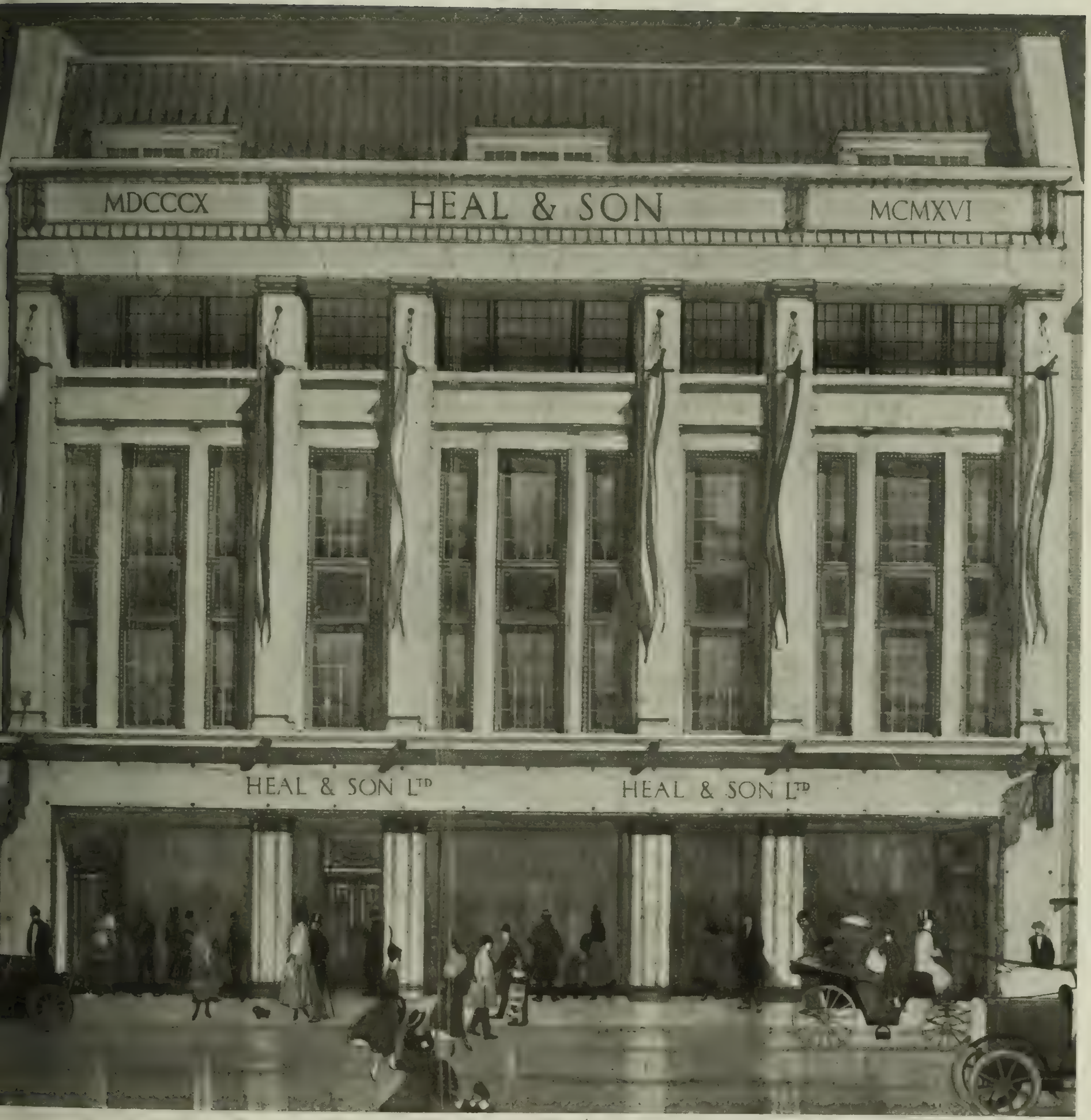
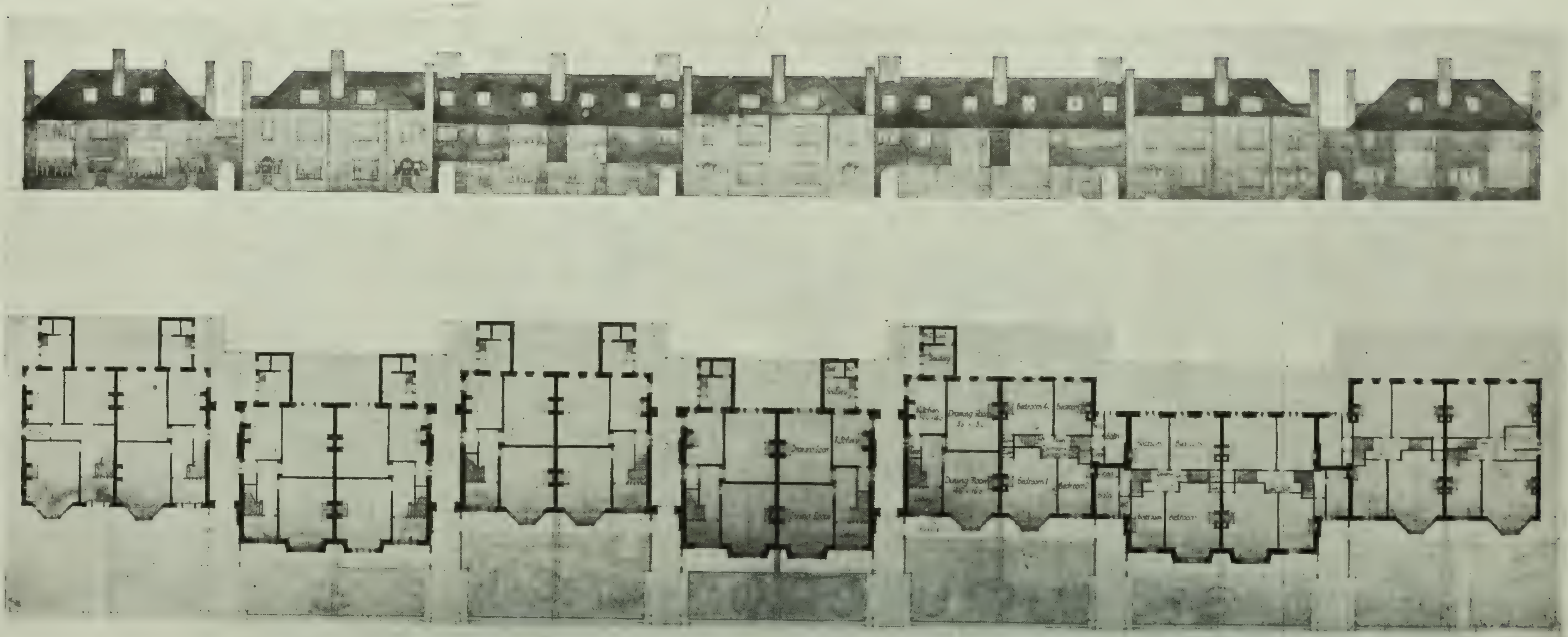


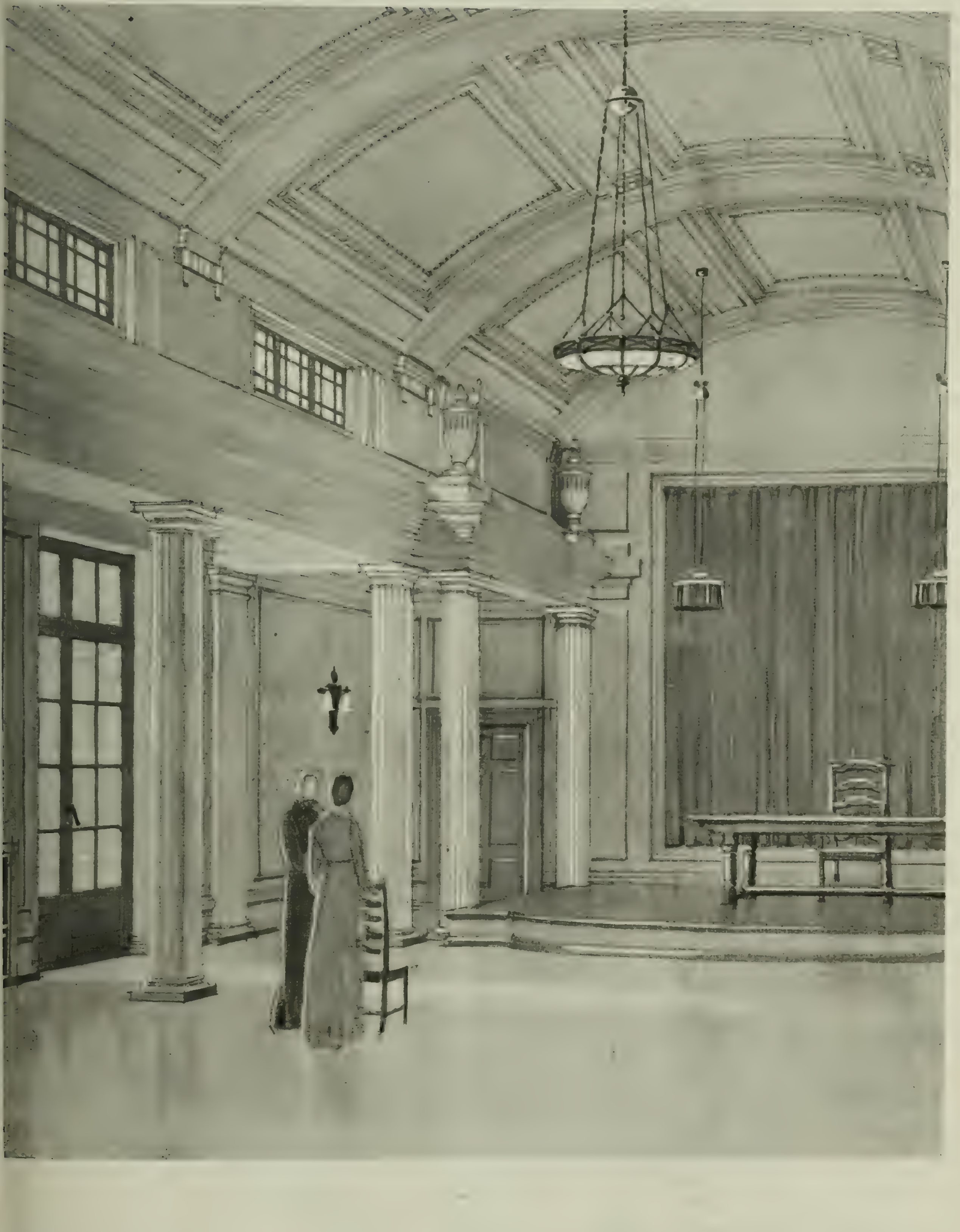
ALL SAINTS' CHURCH, LUTON.—Mr. W. D. Caröe, Architect.



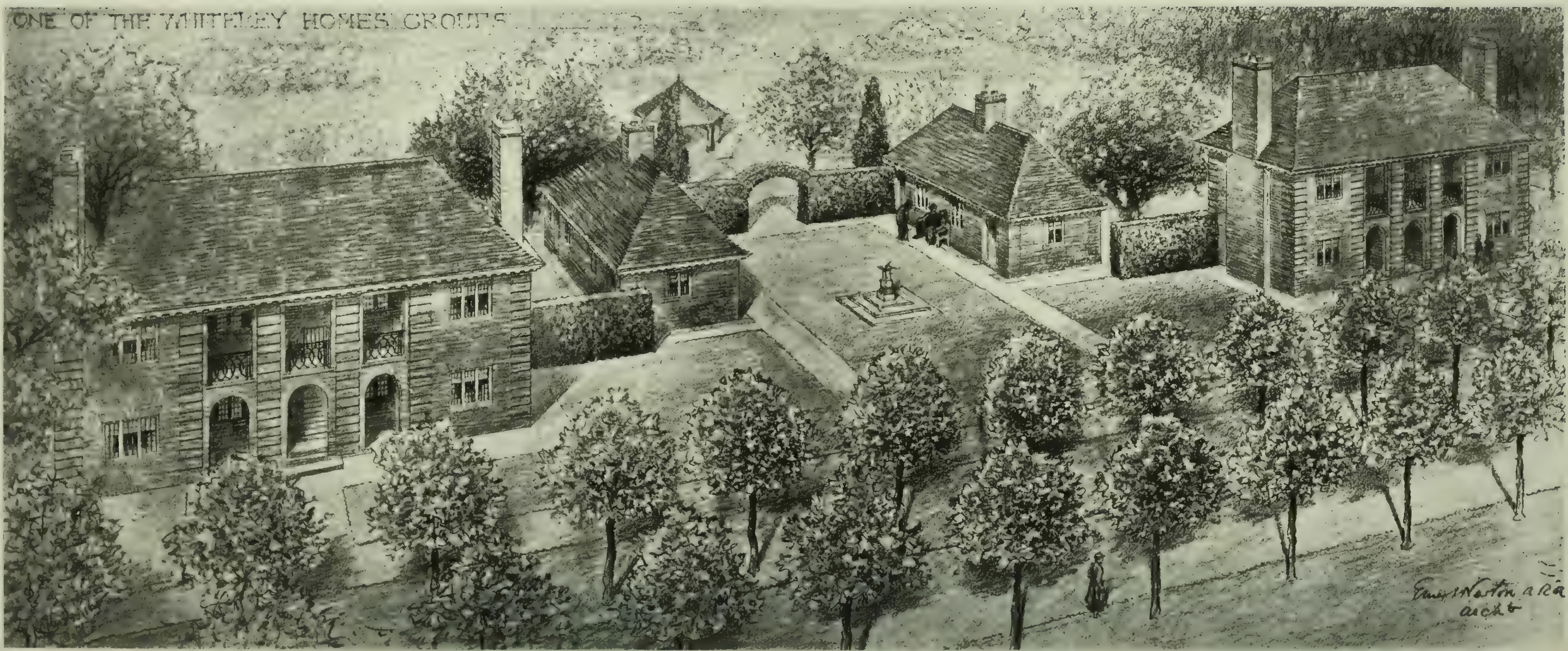
SHOP IN TOTTENHAM COURT-ROAD.—MESSRS. SMITH & BREWER, ARCHITECTS.



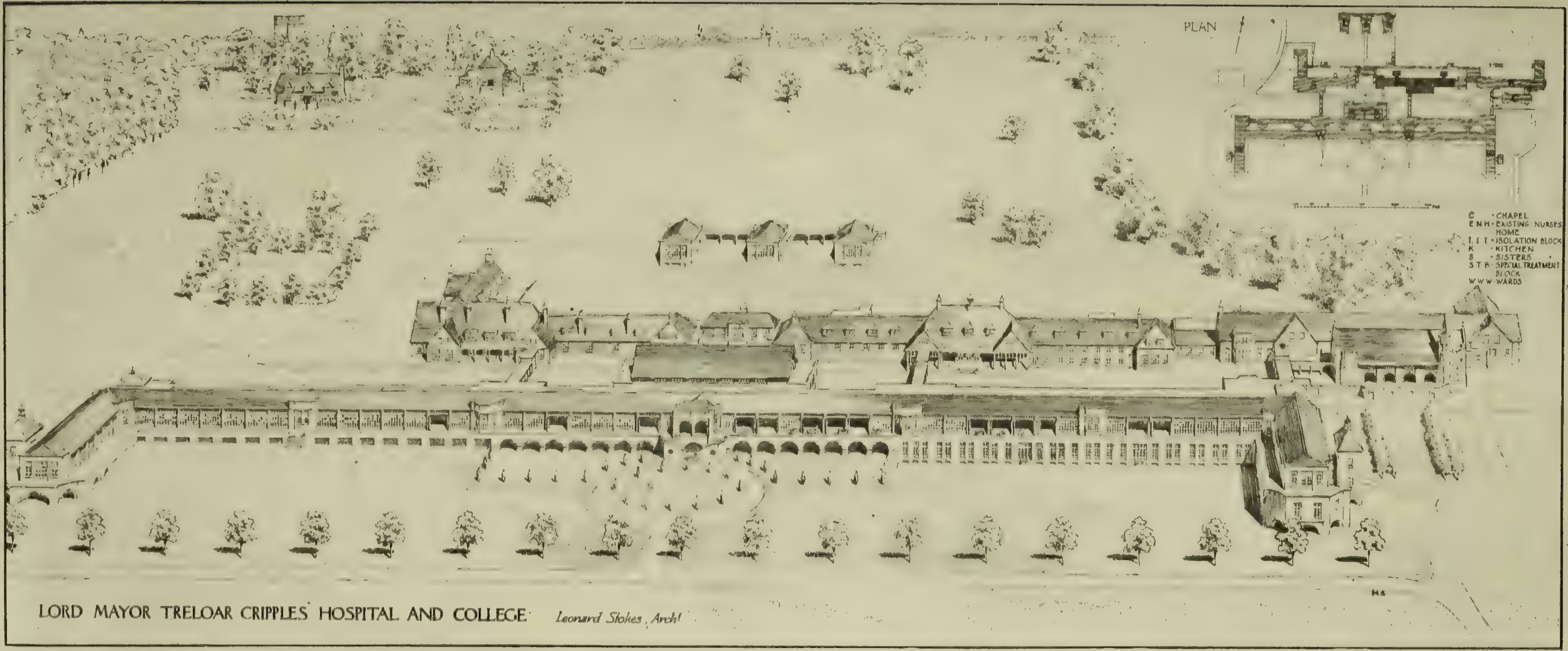
HOUSES ON SANDERS ESTATE, DENMARK HILL.—Mr. Ernest Newton, A.R.A., Architect.



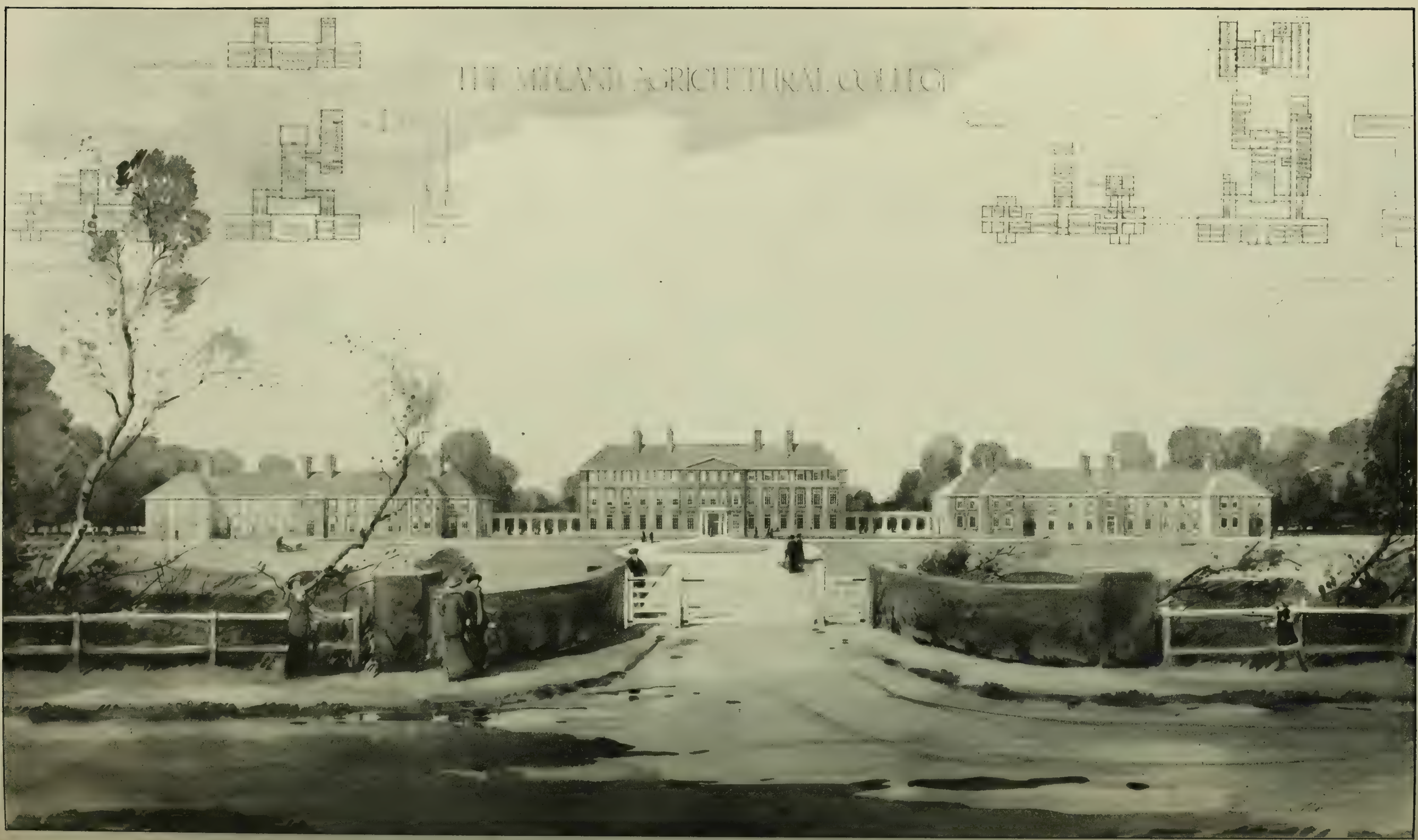
KING'S COLLEGE FOR WOMEN, KENSINGTON.—Messrs. H. P. Adams & C. Holden, Architects.


ONE OF THE WHITELEY HOMES GROUPS
Ernest Newton a.r.a.
archt

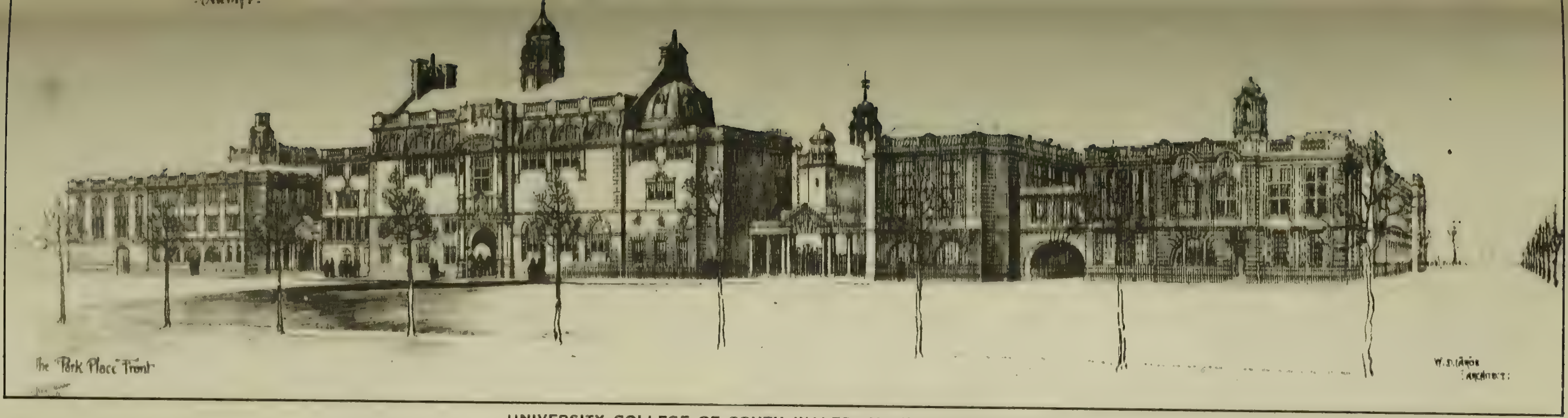
THE WHITELEY HOMES.—Mr. Ernest Newton, A.R.A., Architect.


PLAN
C · CHAPEL
E N H · EXISTING NURSES HOME
I. I. I · ISOLATION BLOCK
K · KITCHEN
S · SISTERS
S T B · SPECIAL TREATMENT BLOCK
W W W · WARDS
LORD MAYOR TRELOAR CRIPPLES' HOSPITAL AND COLLEGE
Leonard Stokes, Archt
HS

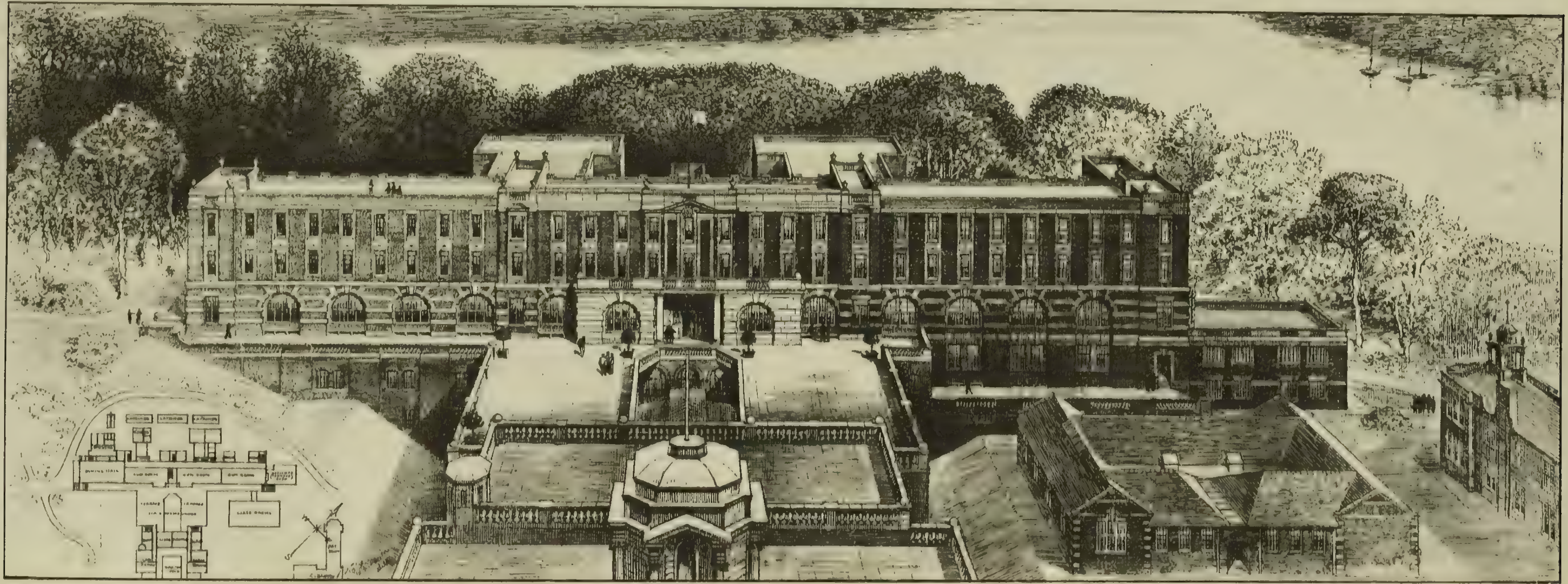
LORD MAYOR TRELOAR CRIPPLES' HOSPITAL AND COLLEGE.—MR. LEONARD STOKES, ARCHITECT



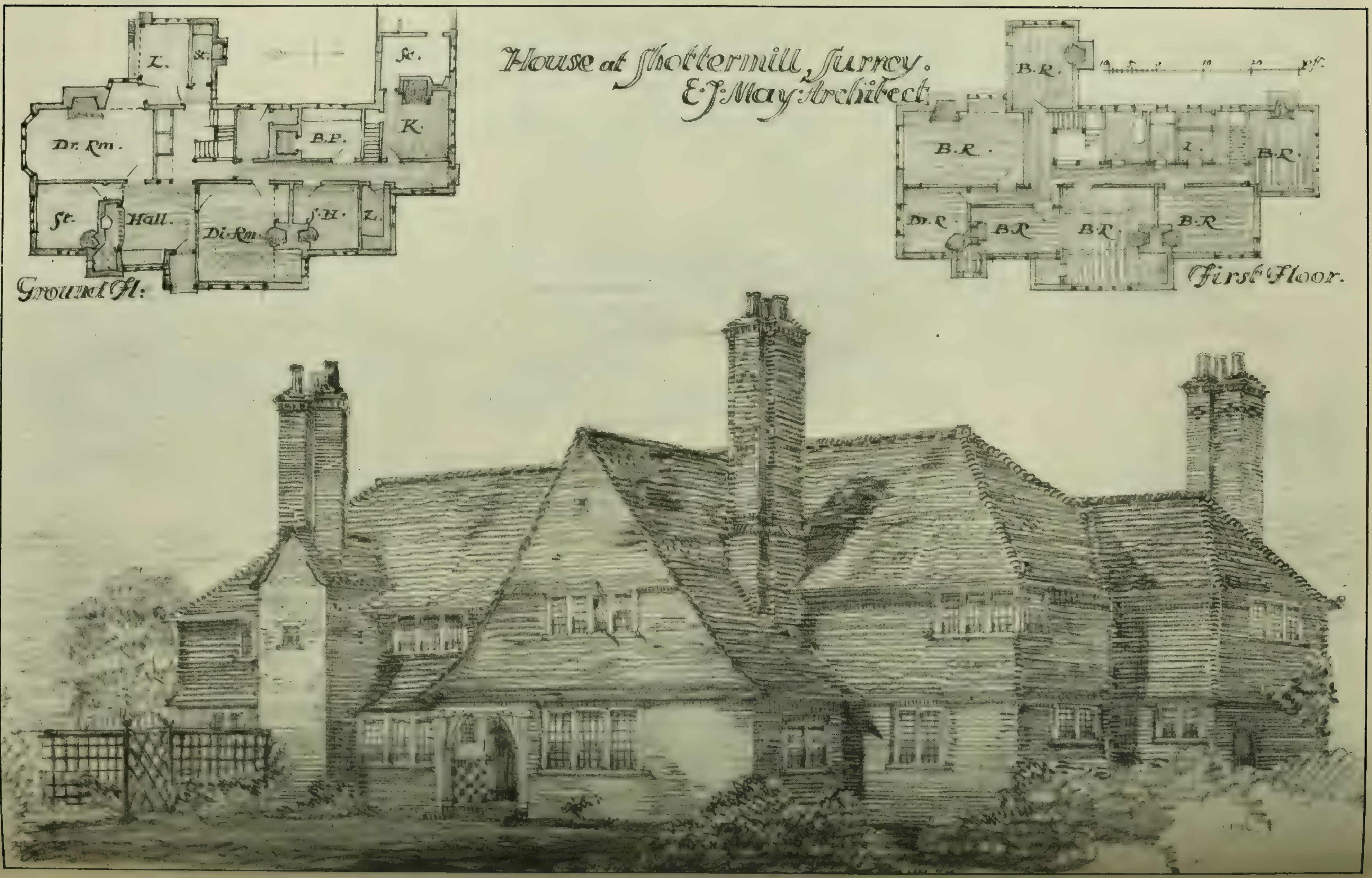
THE MIDLAND AGRICULTURAL COLLEGE.—Messrs. Everard, Son & Pick, Architects.



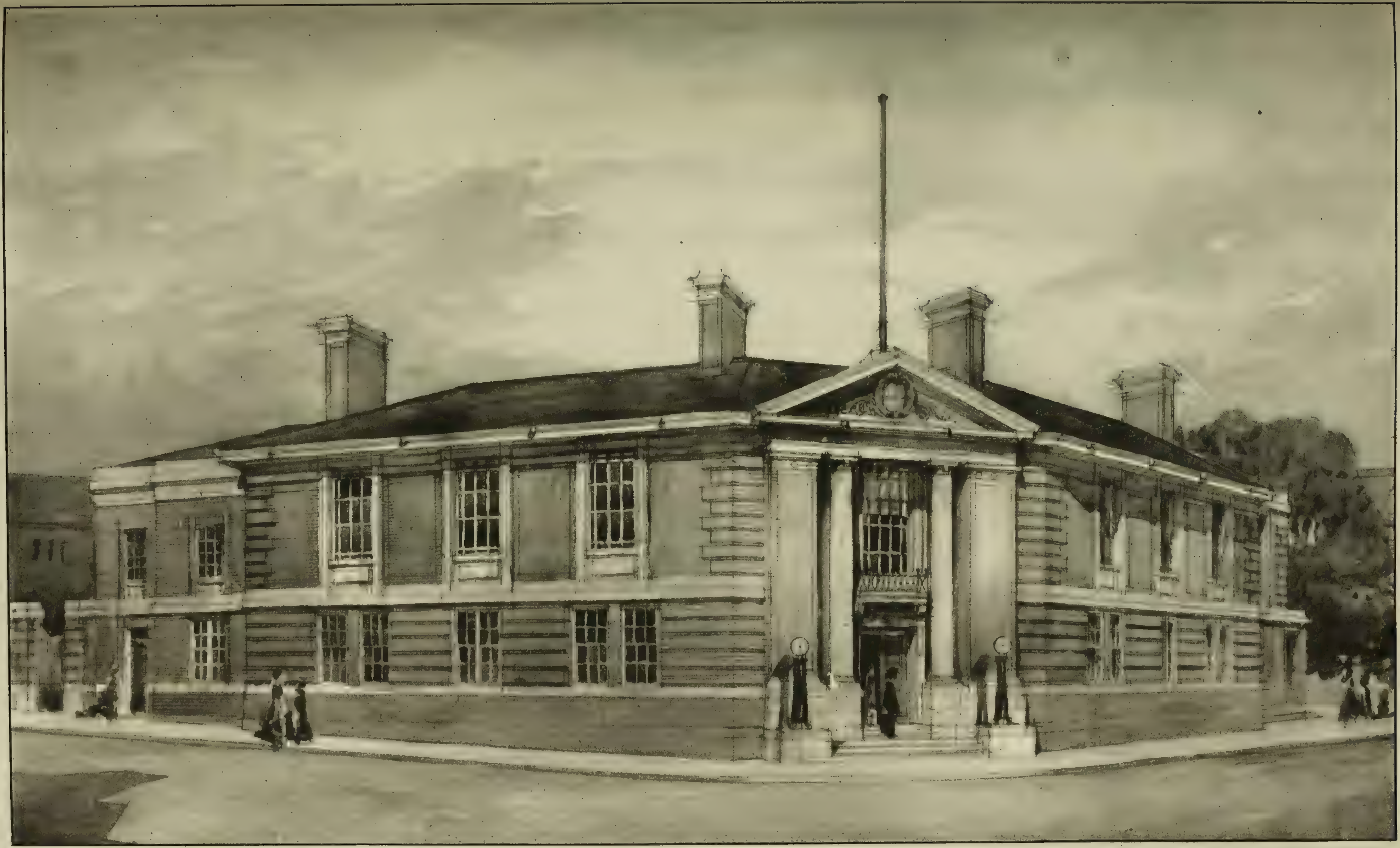
UNIVERSITY COLLEGE OF SOUTH WALES.—MR. W. D. CAROE, ARCHITECT.



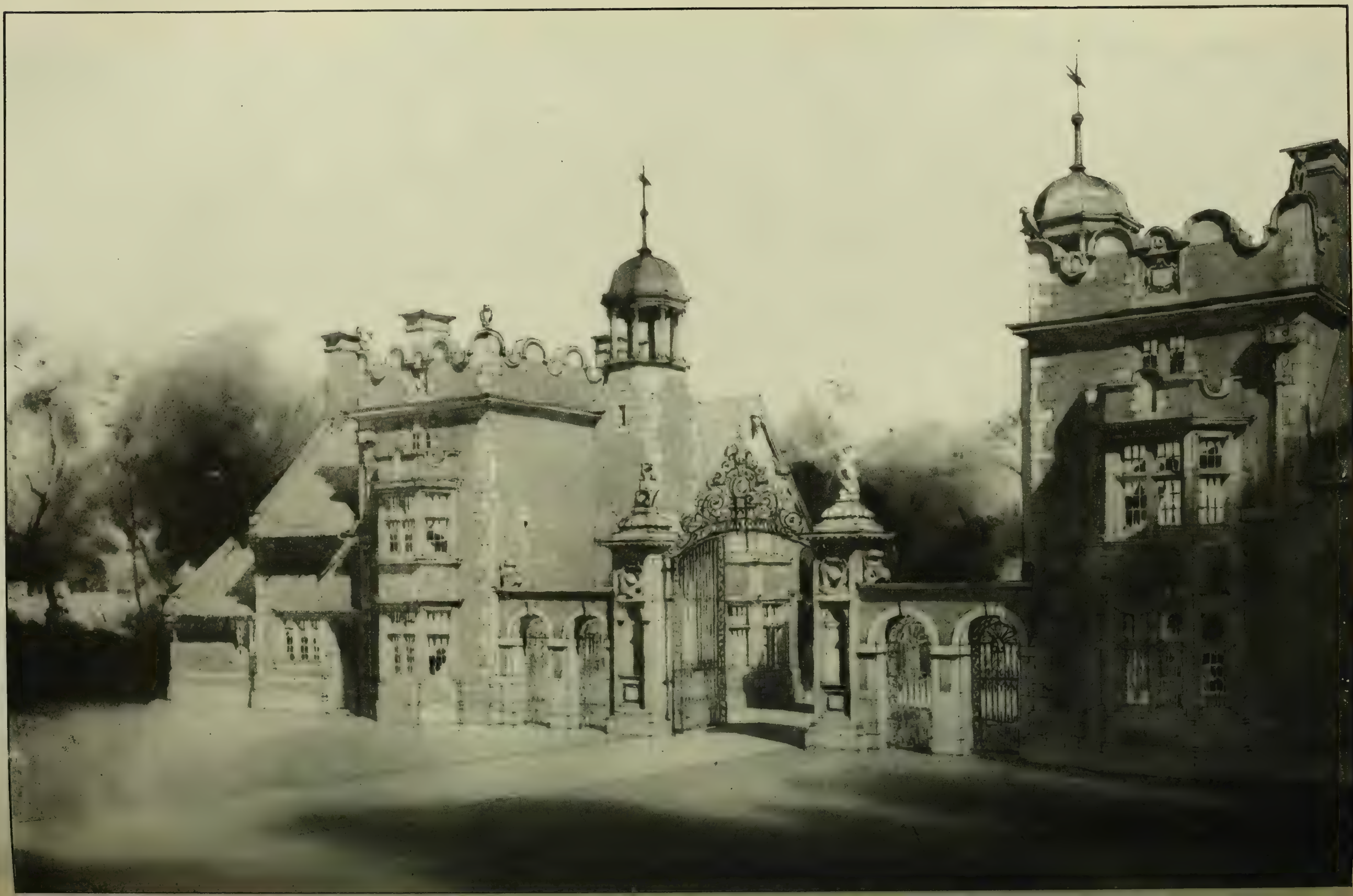
EXTENSIONS TO THE ROYAL NAVAL COLLEGE, DARTMOUTH.—SIR ASTON WEBB, R.A., & SONS, ARCHITECTS.



HOUSE AT SHOTTERMILL, SURREY.—MR. E. J. MAY, ARCHITECT.



WILMSLOW TOWN HALL.—First Premiated Design.—Mr. J. Theo. Halliday, Architect.



THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

L. CX.—No. 3823.

MAY 12, 1916.

THE ADAM MANNER.

MOVEMENTS in art produced by the work and influence of great personalities tend, after a period of progression, to expend themselves and to promote reaction, which for a time distracts attention from the ısic merit of the work produced by genius. It was in this that Wren lived to be treated with ingratitude, while the ler men who followed him considered that their work ıssed that of the great Renaissance architect whom erity acknowledges as one of the immortals of all time. doubtful whether the reaction which culminated in the ic Revival of the nineteenth century would not have ɔened at an earlier date had not the eighteenth century uced in the Brothers Adam architects whose work appealed only to architectural critics and learned patrons of art, to the world of fashion and the social instincts of the thier classes. The architecture of Vanbrugh and Gibb too monumental and alien to the lighter side of life to ıanently hold a place in the regard of the public; and the criticism may be made of a much greater man, Sir iam Chambers; but the work of the Brothers Adam appealed he desire of the world of fashion to have an appropriate ng for a life which was cultivated if artificial and elegant, sometimes wanting in sincerity and strength of purpose.

The Baroque never had a following in England, as its avagance and fancy were alien to the instincts of the people; though that extravagance was eliminated in the work of Louis-Seize period in France, the Brothers Adam worked in anner which was simpler and more in keeping with national iirements than the more elaborate contemporary work rance would have been. In including not only decoration the design of furniture and fittings in the sphere of their urs Robert and James Adam ensured its popularity as ogue—a popularity which has lasted to our day, and cates the wisdom of an architect who makes himself petent to give skilled advice on design as a whole rather on its more purely architectural aspects alone. The thers Adam were fortunate in their parentage, for their er, William Adam, was an architect of no little note, and a position in Scotland comparable with that of Carr at k and the Woods at Bath. They were fortunate also in use they made of foreign travel and the faculty they sessed of making use of their knowledge without becoming e copyists or imitators. The work they produced would n out of place in any other setting, only in a less degree n that of Wren or Inigo Jones, while it had the necessary eal to a generation which had learned to look abroad for sources of artistic inspiration. In the excellent book tten by Mr. John Swarbrick,* and produced by Messrs. sford in the admirable manner with which we associate ir name, we are given in a convenient form a concise and d account of the lives, works, and antecedents of the thers Adam, an account which is supplemented by over hundred fine illustrations. Adam work has been fully strated, for architects of the eighteenth century were not, their predecessors, indifferent to leaving evidence of the ent and character of their claims on the consideration of sterity; but the mere contemplation of work without some owledge of the actual conditions under which it was produced, d the place of those conditions in contemporary history, is t to lead architects astray. The repetition of forms which derived from classical architecture, without the environment of the sentiment and conditions which gave these reproductions a definite meaning and appeal, makes for lifeless architecture and mere antiquarianism. For the student the Adam style involves the study of the classical detail introduced into it—frequently replicas and representations of ornamental features derived from Roman or Pompeian sources which were proper and natural to the feeling of the eighteenth century; for the architect the essential things to be learned are the lessons of refinement, of proportion, and the use and effect of delicate lines of decoration and harmonious shades of colour, and the necessity of unity of type between decorative and architectural detail—in a word, those elements which do not depend on the reproduction of ornamental detail. Now and then it may be necessary to design for someone who is best pleased with a result which the Adams might have actually designed, but we shall serve architecture best if we show that we can assimilate without copying, and if we remember we are appealing to a people the educated classes of which are no longer dilettanti or antiquarians.

That Robert Adam worked in this spirit himself is evident when we reflect that he numbered among his intimate friends Clériseau and also Piranesi, and yet is known to posterity by work which has little correspondence to the contemporary work of France or of Italy; for it is in the minor details of decoration alone in which classical influences are apparent, and their introduction was a direct response to the spirit of the age. In the Preface to their works published in 1773 the brothers write:—"Our ambition is to share with others, not to appropriate to ourselves, the applause of the public, and, if we have had any claim to approbation, we found it on this alone: that we flatter ourselves we have been able to seize, with some degree of success, the beautiful spirit of antiquity and transfuse it with novelty and success through all our numerous works." They go on to explain how inappropriate the repetition of classical detail may be if applied without due discrimination as to its place and position. Such absurd compositions, they added, "took their rise in Italy under the first of their modern masters," who unintelligently used classical detail without considering its applicability. We can, in fact, learn from the Adams how we should in the present consider their own work, and a recognition of their point of view will show us that we should have greater regard for their memories than to consider their architecture a stereotyped example for present copying.

The great quality of Adam work is that, though its detail is always carefully considered, it is always subordinated to main architectural lines, and so is given its full effect. Though we may feel the results to be sometimes somewhat cold and formal, it possesses a quality of elegance in greater measure than the work of any other period. They showed how commercial building, which was in its inception, was compatible with architectural expression, and founded a manner which has given to many streets in the Metropolis an appearance of quiet and ordered dignity without the expenditure of great sums or any endeavour to create architectural *tours de force.* At the present time, when we are recognising the value of town planning and are learning to look on the street rather than the house as our unit of design, the proper understanding and knowledge of the work done by the Adams is more than ever necessary, for they solved, according to the needs of their generation, similar problems to those which confront us now, but on a smaller scale. Could they see the London of to-day it would be a matter for wonder to them that a people whose wealth surpassed by many times that of eighteenth-century England, and who had immeasurably greater access to the

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"Robert Adam and His Brothers." By John Swarbrick, A.R.I.B.A. essrs. B. T. Batsford, Ltd., 94, High Holborn. £2 2s.)

knowledge of the past, could be so deficient in architectural sense as to tolerate the destruction of architectural amenity in our midst.

Messrs. Batsford have rendered a service to architects in bringing out this book now, for, however great and insistent the demand for economy may be after the present struggle, the work of the Brothers Adam is an example of the great truth that architectural excellence does not depend on cost but on refinement, thought, and a nice adjustment of means to end. That it has become a favourite field for the comme decorator should not blind architects to the fact that it af a medium for the expression of the requirements of the buil speculator as well as for the dainty and delicate desig boudoir and drawing-room. For Robert and James A recognised the truth that it is possible to replace the lands of nature with that of art, giving it its appropriate setting meaning. The day of uncontrolled expression of individu in architecture is past if we are to produce the best results

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NOTES.

Daylight Saving. We have never been able to understand the necessity for Mr. Willett's scheme as proposed, though all can appreciate the advantage of advancing hours of work during the summer. Noon has always approximately represented the time at which the sun is at the highest point above the horizon in the centre of each zone. It would seem to be a bungling manner of introducing a change to antedate the correspondence between noon and the same highest altitude by altering eleven o'clock to twelve o'clock. All the advantages claimed could be gained if the railway companies would alter the times of their trains by one hour, and if banks and business offices opened and closed one hour earlier. If people would not breakfast at seven o'clock unless it is called eight o'clock, we should be inclined to think human nature is even more erratic than we judge it to be; but the whole proposal as set out seems an odd way of trying to misguide people by offering them a counterfeit for a reality. It would take most of us longer to associate noonday heat in August with one o'clock than to take the plunge of breakfasting at seven o'clock and lunching at twelve o'clock instead of one. The point is to induce people to realise the advantages of change rather than persuading them they are making none.

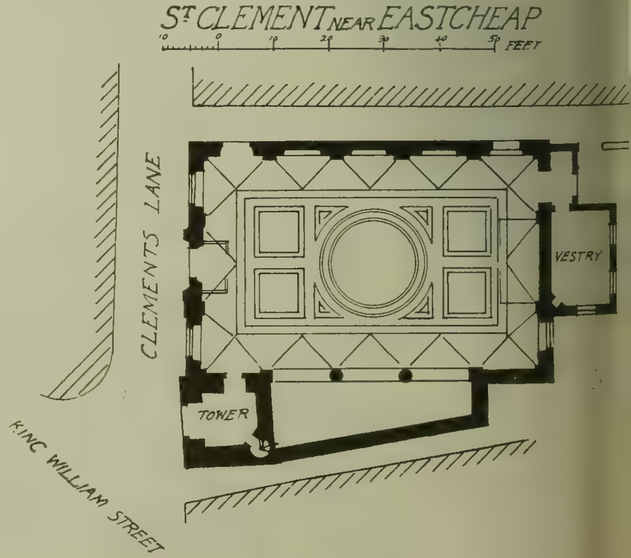
America and Quantities. We have a copy of a paper read before the seventh annual Convention of the Society of Constructors of Federal Buildings, at Washington, D.C., in which Mr. G. Alexander Wright advocates the advantages of having quantities. It seems a curious anomaly that in a country whose building materials are in many ways much better systematised than they are here, and whose building contracts as a general rule run to bigger figures, the custom of having quantities should not obtain. Most of the arguments used by Mr. Wright are too familiar to us to need repetition, as it is not necessary to preach to the converted. Builders have to take such enormous risks in estimating that it is a matter for wonder that they should ever be content to estimate for work, big or small, without full bills of quantities. There is ample justification for a demand for bills of quantities for a small house, and if they were forthcoming it is likely that contractors who do not care to tender for small work would frequently do so to the benefit of employer and architect alike. The builder who has many demands on his time is not likely to wish to give up three or four days to taking out quantities for a small house, but it is quite a different proposition to price a well-drawn-up set of bills for a small house.

Finance (New Duties) Bill. The Imperial Arts League have issued a strong protest against the inclusion of art exhibitions under the Amusements Tax, in which they urge that educational work should be excluded from the incidence of the tax, that the educational value of art has been recognised in every country, and that, as the usual price of admission is one shilling or less, the tax will often amount to over 33 per cent. It is further pointed out that such exhibitions are necessary to artists for the sale of their work, and that art exhibitions are already feeling the effect of the war very keenly. Thus the receipts at the Walker Art Gallery, which had averaged £3,000 a year for thirty-three years, fell in 1914 to £500, and the exhibition would have had to be given up had not private citizens agreed to defray the expense of holding it. The names of a large number of prominent artists and architects follow, including Sir Aston Webb, Mr. Ernest Newton, Sir Ernest George, Sir Thomas Brock, Messrs. Frank Brangwyn, Alfred Parsons, A. S. Cope, George Clausen, John Lavery, William Orpen, and many others, as well as Lords Plymouth and Redesdale. We are heartily in sympathy with the protest, as we feel that the tax will add little to revenue and tend to produce additional hardship among a class of men who are already suffering exceptionally from the trials incidental to the conditions of the time.

The Prevention of Bribery. A league has been formed under the title of the "Bribery and Secret Commissions League (Incorporated)," whose President is Sir Edward Fry, G.C.B., and the Vice-Presidents include the Marquis of Salisbury, Earl Fortescue, Lord Rotherham, and others. For the period of the war any who wish to join the League can do so as Associates on a payment of 5s. annually. The offices of the League are 9, Queen-street-place, E.C. Much as we sympathise with Sir Edward Fry's campaign against bribery and secret commiss and probable as it may be that in the near future, as is alleg the circular issued by the League, there may be much work fo League to do, we are doubtful whether legislation can do much than induce men who take or give indirect payment for ser rendered to adopt more subtle means of exchanging such siderations. We have penalised the man who makes the sma money payment at an election, but no penalty attaches to the who makes the greatest promises—promises which he knows never be performed, but which are often taken on their face v And whereas there is a limit to the amount of money which a ca date can use for purposes of direct bribery, there is no limit ex that of the credulity of the lowest class of the electorate to efficacy of promises made by an aspiring candidate appealing fo support of the voters.

Goods Handling and Distribution. Mr. Arthur E. Collins, the City Enginee Norwich, writes a strong and interesting l advocating that the Board of Trade should investi the proposals made by Mr. Gattie for establishi Railway Clearing House for goods, the advant of which are not limited to the public but extend to the railw whose earning capacity would be increased. Mr. Gattie's suggest have been endorsed by high authorities such as Mr. James Swinb and Dr. Hele Shaw, but so far the railway companies have thr cold water on them. Mr. Collins points out that, though the effici of the locomotive is a hundred times as great as that of a motor l the latter successfully competes with the locomotive owing to heavy terminal inefficiency which exists, and such competitio possible at the expense of the upkeep of our roads. More than though the country is advantageously situated for dealing industrial transport, our inland freights are the highest in world, and railway inefficiency congests our docks, causing u detention of shipping and consequent shortage. We believe t charges to rest on a substantial foundation.

A "Peace Room," Chelsea. Mr. Kemp Prosser has made a fresh colour sch for his "Peace Room" at No. 11, Manor H Studios, Flood-street, Chelsea. The violet signifies the love for truth, spiritual perceptio denoted by a canopy of sapphire, love for light space is expressed in the lemon-yellow hue of the walls, and and perception in the green and mauve of the curtains. The w rose of silence and power flanks the cross, shapened as a key of which surmounts the dove upon an embroidered cloth and fo a draped background for the grand piano coloured in gold. understand that the room will be opened to wounded soldiers refreshment and repose, with recitations and performance of m at stated times until the end of the current month.



Wren's Churches. (*See page* 347.)

E LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

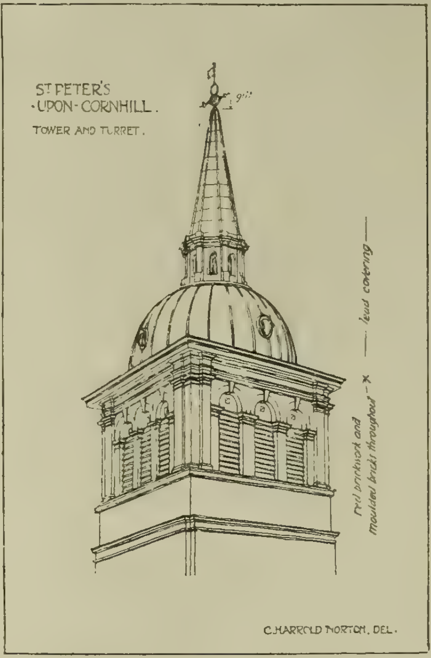
No. XXXII.—St. Peter, Cornhill.

BRASS tablet which was preserved from Great Fire and is now fixed in the vestry t. Peter, Cornhill, states that King Lucius, first Christian King of Britain, built hurch on the site A.D. 179, and this ch was constituted a cathedral till the of Augustine 400 years later, when the bishop's see was removed to Canterbury. hout giving too much credence to this ition, it may be assumed that a church ed on the site in very early times.

he advowson belonged in the fourteenth ury, together with that of St. Margaret ens, to the Nevills, but was finally con- d in 1411 to the Mayor and Commonalty London, in whose gift it has since ined. The first church was rebuilt in reign of Edward IV., with the exception of steeple, and extensively repaired in 1632. n's church was built in 1680-81 at a cost of 47. The east elevation is a pleasing feature racechurch-street; the main entrance is ugh a porch from Cornhill, flanked with s on either side. The structure is neither beautiful nor interesting, but the woodwork fittings, especially the door-cases at the end, the chancel screen, pulpit, and the r, are exceedingly good; and the font, the r of which belonged to the previous church, excellent example of design. The appear- of the interior is spoilt by the very high s on which the nave pilasters rest and somewhat unpleasant form of the elliptical ng. The tower, which is rather picturesque beautiful, can best be seen from the church- l immediately to the south of the church.

No. XXXIII.—St. Clement, near Eastcheap.

The church of St. Clement is situated in Clement's-lane, near its southern end in King William-street. It replaces a former church of the same dedication, and one which was not rebuilt after the Great Fire, named St. Martin Orgar, which was situated in Martin's-lane, Cannon-street. Though this church was not rebuilt, it was repaired and served as a meeting-place for French Protestants, being demolished early in the nineteenth century. The advowson of St. Clement belongs to the see of London, and the church was built by Wren in 1686 at a cost of £4,365, but it was unfortunately modernised and decorated under the direction of William Butterfield in 1872, and robbed in the process of much of its interest. It is a rectangular building with a flat ceiling, having a deep cove round, into which the clerestory windows cut, and has a single aisle separated by columns from the nave. There is little work of interest in it besides two good door-cases and a fine pulpit. The external treatment is wanting in architectural quality, though it is recorded that the parishioners were so pleased with the tower that they presented Wren with one-third of a hogshead of wine in recognition of their satisfaction with his services.



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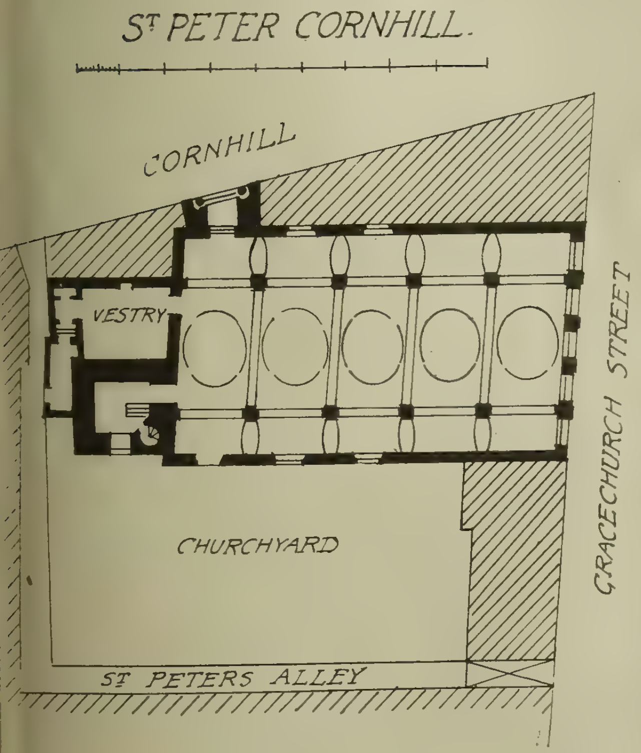
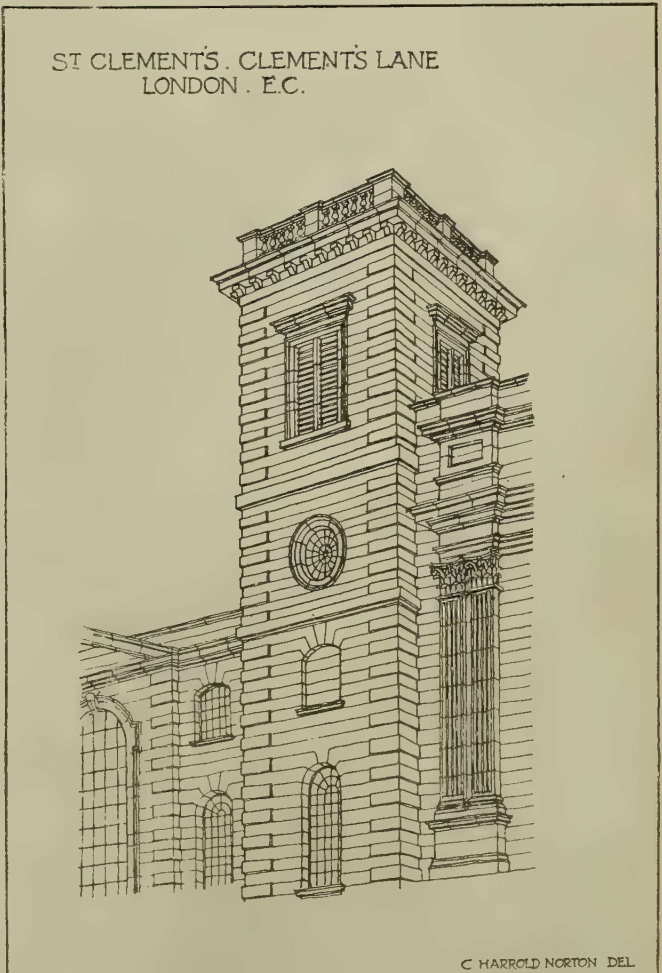
A TOWN-PLANNING OPPORTUNITY.

In rebuilding those parts of Dublin which have been broken in the recent fighting an opportunity should be given to some architect to produce a large scheme. Sackville-street, though it boasts of being the widest thoroughfare in the kingdom—a claim that portions of the Whitechapel-road might dispute—was certainly motley in its architecture and contained much that lacked any dignity of appearance. Its front had that broken aspect which comes when new buildings are allowed to shoot up above the old and when there is no unity of thought among the different architects employed. Behind it and to either side along the quays is much property that will be none the worse for being cleared away. There are worse things than a big fire for a capital city which is emerging into prosperity after a long decay of the grandeur which marked it in the past.—*Westminster Gazette.*



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)



We take the following from the Report of the Council of the R.I.B.A. for the official year 1915–16:—

"In addition to the normal losses the Council have to record the death of twelve Associates, seven Licentiates, and twelve students, who have laid down their lives in the service of their country. There are now 1,919 Licentiates on the roll. Since the publication of the last annual Report twelve Licentiates have passed the examination qualifying for election to the Fellowship, and seven of these have been duly elected as Fellows.

The Progressive Examinations were held in June and November-December, 1915. The Preliminary was held in London, Bristol, and Manchester. The Intermediate was held in London, Bristol, and Manchester. The Final and Special Examinations were held in London. The results are shown in the following table:—

	Admitted.	Exempted.	Examined.	Passed.	Relegated.
Preliminary Examination ...	110	53	57	38	19
Intermediate Examination..	95	60	35	16	19
Final and Special Examination ...	81	—	81	37	44

The Statutory Examination qualifying for candidature as District Surveyor in London, and for candidature as Building Surveyor under local authorities, was held in London in October, 1915. There were eight candidates, of whom five passed.

The Council desire to thank the Hon. Examiners for the continuance of their invaluable services. Since the issue of the last annual Report the Council have appointed the following gentlemen to serve as representatives of the Royal Institute:—Messrs. Max Clarke and F. M. Elgood (County Councils Association Road Congress and Exhibition, June, 1915); Messrs. Paul Waterhouse and W. R. Davidge (Institution of Municipal and County Engineers' Road Conference, June, 1915); Mr. Reginald Blomfield, R.A. (the London Society); the President and Sir Aston Webb, C.B., R.A. (National Congress on Home Problems after the War); Messrs. H. V. Lanchester and John Slater (University of London Architectural Education Committee); Mr. J. Alfred Gotch (University of Sheffield); Sir John Burnet and Mr. Guy Dawber (Central Organisation of Trade Interests); the President and Messrs. Paul Waterhouse and H. D. Searles-Wood (Committee on Organised Science).

During the course of the year the President has appointed the following architects to act as arbitrators in connection with building disputes:—Messrs. Max Clarke, W. E. Vernon Crompton, Mowbray A. Green, Edwin T. Hall, Henry T. Hare, Alan E. Munby, John W. Simpson, W. Gillbee Scott, John Slater, Sydney J. Tatchell, Adam F. Watson, Percy S. Worthington.

Since the issue of the last annual Report the Council have made the following grants:—Architectural Association, £500; Architects' Benevolent Society, £100; Architects' Volunteer Training Corps, £50; Artists' War Relief Exhibition, £10; Society of Dilettanti, £50; British School at Rome, £50.

In addition to the special grants to the Architectural Association which were mentioned in the last annual Report, the Council have been enabled to present to that body a further sum of £400. Of this amount £200 was paid in respect of the financial year ending December 31, 1915, and £200 in respect of the current year.

The grant of £50 to the Society of Dilettanti was the result of an undertaking entered into before the war to enable the Society to publish their new volume of "Antiquities of Ionia."

The work of the Royal Institute has, of necessity, been seriously affected by the war. The programme of sessional papers has been suspended and only business of a routine and uncontroversial nature has been transacted at the general meetings. The prize competitions for the year have again been postponed, and the examinations which in the ordinary course would have been held in November, 1916, have been cancelled.

The Record of Honour which has been compiled by the Royal Institute now contains the names of some 2,250 architects who are serving in the Forces. Included in this number are fifty-seven Fellows, 426 Associates, 228 Licentiates, and 272 students of the Royal Institute. The following is a list of those of our members who have lost their lives in the war:—

Associates.

Laurence Kingston Adams, Lieutenant, 7th King's Liverpool Regiment—Killed in action.

Spencer Ellwood Barrow, Lieutenant, 5th Battalion King's Own Royal Lancaster Regiment—Died of wounds.

James Everitt Bownass, Princess Patricia's Canadian Light Infantry—Killed in action.

Wren's Churches: Font, St. Peter, Cornhill.
(*See page* 347.)

Leonard John Finning, Sergeant, 24th Battalion 6th Australian Infantry Brigade—Killed in action.

Edmund Herbert Gibson, Lieutenant, Royal Naval Volunteer Reserve—Died of wounds.

John Nixon Horsfield, Lieutenant, Royal Naval Volunteer Reserve—Died of wounds.

Wilfred Hoyle, Royal Fusiliers—Died service.

George Edward Hunter, Captain, Northumberland Fusiliers—Killed in actio

George Alexander Kay, Second Lieute 2nd Notts and Derby Regiment—Kille action.

William Leonard Boghurst Leech, Rifle 9th County of London Regiment—Die wounds.

Albert Edward Lowes, A.S.C., 6th North berland Fusiliers—Killed in action.

Louis Augustus Phillips, Sergeant. P Schools Battalion, Royal Fusiliers—Kille action.

Licentiates.

George Pigrum Bowie, Captain. Battalion 1st Canadian Contingent—Kille action.

Aldersey Dicken, Sub-Lieutenant. R Naval Volunteer Reserve—Died on servi

Christopher René Harrison, Lieutenant, Leicester Regiment—Died of wounds.

Charles Henry Rowed Henman, Qua master-Sergeant, 1st Field Company, Divis Engineers, R.N.D.—Killed in action.

Arthur Maxwell Phillips, Captain, 11th K Own Yorkshire Light Infantry—Killed in ac

Henry Charles Pullin, Rifle Brigade—K in action.

Alexander Wingate, Second Lieutenant, Highland Light Infantry—Killed in acti

Students.

Thomas William Dowsett, Sergeant, Artillery Company—Killed in action.

Edward George Dawson Fromant, La Corporal, 1st City of London Sanitary Comp R.A.M.C.—Died of wounds.

Adrian T. Hardman, Lieutenant, F Fusiliers—Died of wounds.

Topham Becher Dabridgecourt Hough, Se Lieutenant, 8th East Yorkshire Regim Killed in action.

John Hawksmore Irvin, 4th Battalion forth Highlanders—Killed in action.

F. H. Lawson, Captain, 5th Batt Northumberland Fusiliers—Killed in actio

Charles Joseph Newbery, Private, 3rd F Fusiliers—Died of wounds.

Thomas Edwin Turner, Lieutenant, County of London Regiment—Killed in ac

James Bernard Millard Walch, Se Lieutenant, 2nd Royal West Surrey Regi —Killed in action.

Denis H. Walker, Captain 5th P. Yorkshire Regiment—Died of wounds.

Leslie George Whitbread, Private, Battalion Manchester Regiment—Died service.

Henry Montagu Whitehead, Se Lieutenant, 4th East Surrey Regim Killed in action.

The most important work of the year been that done by the Architects' Committee and its two subsidiary Commit The Architects' Benevolent Society has rend the most valuable assistance in the admini tion of the funds subscribed for the reli architects, and the Civic Surveys which been set on foot with the assistance of Royal Institute have provided paid employ for a number of members of the profe whose practices have been stopped by the The most important of these surveys—th Greater London—is housed in the R.I. Galleries, and the expenses of all the sur are paid by the R.I.B.A., while the sal of the workers are paid by grants from National Relief Fund.

The consideration of the Report of Official Architecture Committee, referred t the last annual Report, has been again def for twelve months.

The usual statement appended to this Re shows that the finances of the Royal Insti have met the strain of war conditions with g success.

Most of the architectural students are ser in the Forces, and there is consequently a he fall in the receipts from examination The subscriptions of all members and Licenti serving with the Forces are also remitted. 1915 this measure cost the Institute s £700, and in 1916 it will probably cost over £900.

spite of these and other losses there was ·lised surplus of £719, in place of an ·ipated deficit of £260, in the financial ending on December 31, 1915, and a ·erate surplus is also anticipated in the ·ent year. It will be observed that a sum :290 was received from the Henry Jarvis ·t in aid of the educational work of the ·al Institute. The warmest thanks of the ·ncil are due to the Finance and House ·mittee, whose careful management has been ·onsible for such satisfactory results."

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CIVIC CENTRE, SEATTLE.

HE city of Seattle occupies a position of ·ual natural beauty and diversity at the l of Puget Sound and Lake Washington, is one of the American cities which has ·eloped most rapidly within the last thirty ·rs. Its development has been in good ·ds, and large views of its future needs ·e guided its builders. In 1909 it was decided a city plan should be prepared at a cost of .000, a measure which was passed by the ·est popular vote ever recorded in the annals the city. The Commission numbered ·nty-one, and were chosen from the Board Education, the Park Commission, Board of ·lic Works, City Council, County Com- sioners, the Washington State Chapter of American Institute of Architects, Engineers' ·iety, Commercial Club, Central Labour ·ncil, Carpenters' Union, water front owners, ·et railway, steam and marine transportation ·panies, the Clearing House, manufacturers, l estate and bar associations. It met every weeks from June, 1910, to September, .1, when it presented its final Report to the ·y Council.

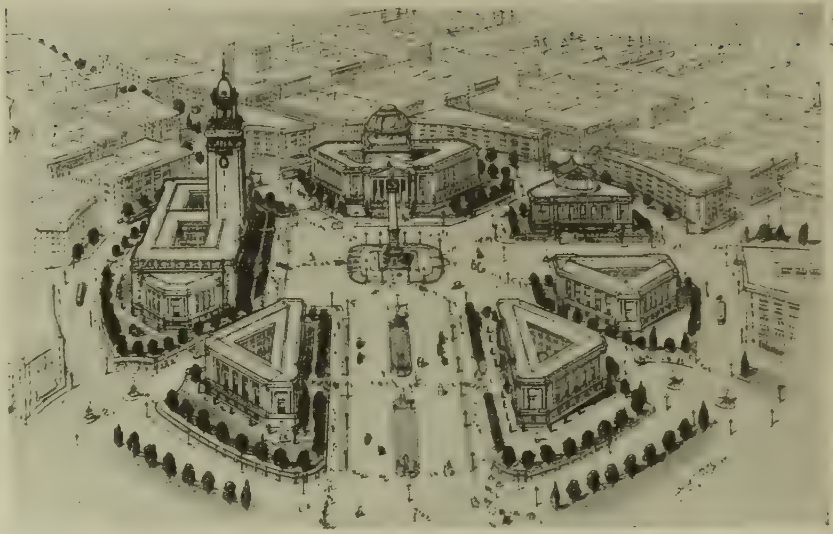
Seattle: View of Civic Centre from Olympia Mall.
(From the *Journal* of the American Institute of Architects.)

·he Report dealt with arterial highways, ·id transit, municipal decorations, harbour ·provements, rail transportation, the civic ·tre, and contained general and detail maps ·h appendices giving engineering data for the ·struction of the various projects mentioned. ·e plan was developed inward from its ·iphery, co-ordinating the highway, rapid ·nsit, railway and water services. The Civic ·ntre, which we illustrate, was the outcome the solution of these practical problems l not the point of departure. Though the ·izens of Seattle had approved of the making the plan, they rejected a proposal to carry out in a concrete form from the fear that ·lividual property interests might be dis- ·rbed; but, though it was rejected in its ·tirety, the portion of the plan which repre- ·ted a comprehensive plan of port develop- ·ent was adopted as a definite scheme, and .200,000 has already been expended upon it. ·e scheme for a Civic Centre is not likely to be ·opted in the near future, but Seattle must the gainer by having before it a systematic d well-thought-out plan embracing the ·y's needs as a whole.

◆

NEW LECTERN, SEAFORD CHURCH.

A carved lectern has recently been placed in ·aford Church. It is composed entirely of ·k, and is 6 ft. in height. The work was ·rried out by Messrs. Harry Hems & Sons, ·ulptors, Exeter.



Seattle: Civic Centre and Diagonal Approach to present Business District.
(From the *Journal* of the American Institute of Architects.)

CORRESPONDENCE.

National Housing and Town Planning Congress.

SIR,—Mr. Norman McKellen in his letter on this Congress asks to draw attention to "an important phase of the proceedings which does not appear in your admirable report." May I point out that the matter he refers to was dealt with in the first portion of the report, which appeared in the *Builder* of April 21?

THE WRITER OF THE REPORT.

The Wonder of Work.

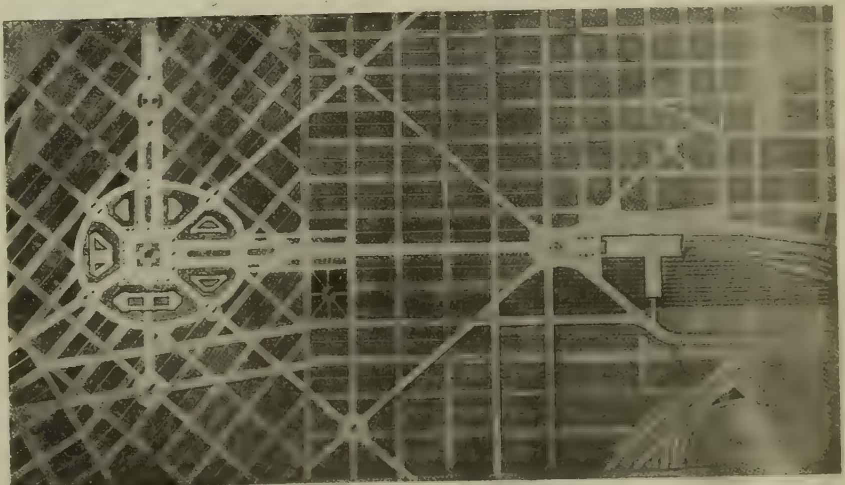
SIR,—I did suggest an article on the "Wonder of Work" to the Editor of the *Studio*, and he accepted it—accepted the illustrations; but before I could get the "statement" finished he returned them. He rejected the illustrations, because (letter dated March 27) "as to the Port of Genoa, which you say ought to come well in reproduction, I have sufficient experience of half-tone reproduction to know it will not." The very remarkable reproduction you printed answers that; while, if any further answer is required, this very print was selected to illustrate the British official catalogue of the Leipzig Exhibition of Graphic Art in 1914, and was there reproduced in half-tone, as, I believe, an example of what could be done by that process in England!

The Editor then continues:—"To speak quite frankly, I do not think the collection (of prints) you sent me contains your best work, and I should prefer to wait till you have something better to offer. I return the prints herewith," and his letter speaks for itself. But amongst the prints not worthy of a place in the pages of the *Studio* were the three others you published—one, the Woolworth Building, had already appeared in the *Studio*, is owned—the stone—by H.M. Government, and has been on exhibition for some years at the Victoria and Albert Museum as an example of modern lithography.

The other, the Campanile, is owned by the Municipality of Venice, and was selected by them for publication on the completion of the building.

The Shipbuilding Yard has only just been published. Of course, the Editor of the *Studio* may be right and all the authorities, owners, and collectors wrong.

JOSEPH PENNELL.



Seattle: Plan of Civic Centre, Central Avenue and Railroad Project.
(From the *Journal* of the American Institute of Architects.)

GENERAL NEWS.

Professional Announcement.

Mr. C. M. Hadfield, F.R.I.B.A., of Cairns Chambers, 19, St. James-street, Sheffield, will continue the practice of an architect and surveyor, hitherto carried on in partnership with his late father, with whom, during more than thirty years, he worked in close association as pupil, assistant, and since 1897 as partner.

The British Firing Line.

Quartermaster - Sergeant - Instructor E. Handley-Read, of the Machine Gun Corps (and late of the Artists' Rifles), has just completed a large series of water-colour drawings depicting the trenches and scenes familiar to our men in the British firing-line. An exhibition of these pictures is to be opened on May 12 at the Leicester Galleries, Leicester-square.

The Royal Sanitary Institute.

At an examination in Sanitary Science as applied to Buildings and Public Works, held in London recently, Mr. H. A. Watkins, Richmond, was granted a certificate. Three candidates at an examination in School Hygiene were granted certificates, and at an examination for Inspectors of Nuisances ten candidates were certified, as regards their sanitary knowledge, competent to discharge the duties of Inspectors of Nuisances.

Estate for the City of Birmingham.

Mr. Barrow Cadbury has offered to the City of Birmingham as a gift from himself and his wife the property known as the "Uffculme Estate." Uffculme is in Queensbridge-road, near King's Heath Station, and comprises 36 acres of land partly occupied by the Open-Air School, a large field on the opposite side of the road, and about 3 acres of allotment land. Mr. and Mrs. Cadbury have stipulated that if houses are built upon it there shall not be more than ten to the acre, and all shall be erected and the grounds laid out on Bournville Village lines. The site has a southern aspect, is close to the tramway running from the city to King's Heath, and is also near to King's Heath railway-station.

Whiteley Homes.

These Homes, some of the designs for which we illustrated in our last issue, are being built on a beautifully wooded site called Barhill Park, near Walton-on-Thames, from the designs of seven different architects, for the Trustees of the Whiteley Homes, the general lay-out being from a design by Mr. R. Atkinson, selected in limited competition, and the general building scheme by Mr. Walter Cave, each of whom is also architect for a section of the Homes; each architect had discretion as to the placing of his individual buildings in his particular section. Each inmate will have a living-room and small kitchen. The houses by Sir Aston Webb, R.A., & Sons, provide accommodation for thirty inmates, together with a nurses' home and a recreation hall accommodating some 500 people. The contractors for the whole buildings are Messrs. Henry Martin, Ltd., of Northampton, and the clerk of works is Mr. F. Comport.

Effect of the War on Art.

Lord Redesdale took the chair at the annual dinner of the Artists' General Benevolent Institution at the Hotel Cecil. Proposing the toast, "Prosperity to the Artists' General Benevolent Institution," the Chairman said that at the present time, when taxation was straining the power of the rich man almost to breaking-point, works of art were among the first luxuries with which men were compelled to dispense. Vast sums were given now and again for masterpieces of Rembrandt, Titian, Velazquez, Reynolds, and Gainsborough, but these prices were paid by millionaires, who for the most part were men who did little or nothing to encourage modern art. Even for the most successful artists it must be a difficult matter to realise anything approaching their normal income. Of all professional men, none had offered themselves so ungrudgingly as a sacrifice in this war as the artists.—Sir Aston Webb announced that the list of collections and donations had reached a total of £3,124.

A Sargent Exhibition.

An exhibition is being arranged by Miss Elizabeth Asquith at the Grafton Galleries in June, at which many of Sargent's portraits will be shown. The funds realised from the exhibition will be given to the Arts Fund, of which Miss Asquith is Chairman.

Bust of Cardinal Newman.

A bust in bronze of Cardinal Newman has been set up in the gardens of Trinity College, Oxford. It is placed under the rooms occupied by his tutor, and looks towards Wadham College. On one side of the bust there is the note, "A. Broadbent, sculptor, 1915," and on the other, "Presented by D. La Motte, Esq., M.A." The pedestal, which is of stone, bears the inscription, "John Henry, Cardinal Newman, 1801–1890."

The Surveyors' Institution.

Mr. F. Noel Keen, of the Parliamentary Bar, lecturing at the Surveyors' Institution on Monday, submitted a comprehensive scheme for the development of agricultural land. He suggested that within a radius of 10 miles from the centre of a town 10,000 or 15,000 acres might be acquired first and the enterprise managed by a Parliamentary company as one co-operative concern. The company, which would be under Parliamentary control, should not be run in the interests of outside capitalists, but a large financial interest, and if possible the predominant interest, should be vested in those engaged in active employment under the company.

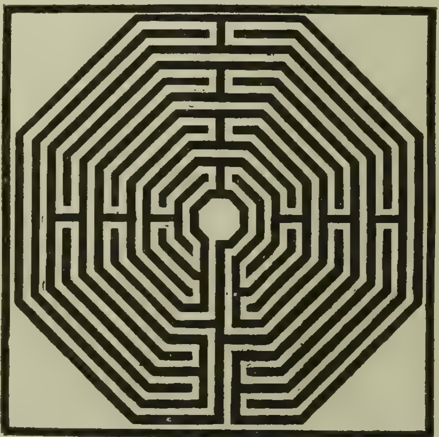
Project to Dry the Zuyder Zee.

The problem of removing the water from the flooded district of North Holland has not yet been solved. About 40,000 acres, it is stated, are now inundated in that province. The average height to which the water must be lifted is only 3 ft. to 4 ft., but the total amount to be pumped approaches 7,000,000,000 cub. ft. This flood has revived the project of drying the Zuyder Zee, and a Bill is now before the Netherlands Parliament for appropriating money for this work. The expense is estimated at £18,000,000, part of which is to cover indemnities to fishermen and for similar purposes. The cost of the dams will probably be under £10,000,000. The principal dam would be about fifteen miles long and average 20 ft. in height.

Arras Cathedral.

We have received from Messrs. Gay & Hancock, Ltd., publishers, 12 and 13, Henrietta-street, Covent-garden, W.C., the following letter, together with a print, a reproduction of which we give herewith :—

"SIR,—We are enclosing herewith a print of the 'labyrinth of the Arras Cathedral.' It has been sent to us by one of our travellers, who is at the front, W. H. Anderson, of the Royal Scots. He informs us that it is not a 'puzzle,' but a plan of the labyrinth under the Cathedral. He found the prints in a ruin in the vicinity, a house which appears to have been occupied by a librarian from what he saw among the *débris*."



"Labyrinth," Arras Cathedral.

Park as War Memorial.

Mr. A. V. Paton has presented to the Natio Trust, as a memorial of his brother, Capt M. B. Paton, South Lancashire Regiment, w lost his life in Gallipoli, and of other Wir men killed, an open space of about 18 acres moorland adjoining Thurstaston Comm Cheshire. By arrangement with the Natio Trust the Birkenhead Corporation will take ov the management.

Art Treasures Destroyed.

It is stated that all the contents of the Roy Hibernian Academy, in Lower Abbey-stre Dublin, were completely destroyed during t recent outbreak in Ireland. They includ many valuable works of art, for at the ti of the rising an exhibition of pictures a sculptures was being held, while in the gall there were portraits of a long line of preside extending back over a century.

Captain Scott Memorial.

In St. Paul's Cathedral a few days ago t Prime Minister unveiled a bronze memor tablet to the memory of Captain Scott and l gallant companions. The memorial, the wo of Mr. S. Nicholson Babb, contains a medalli portrait of Captain Scott and a panel in rel representing the Polar party on the marc These are within an architectural framin surmounted by three allegorical figures— the right, "Discipline"; on the le "Courage"; and in the centre, "Glory."

University of London, King's College.

The training classes for munition work which were established at King's Colle Strand, W.C., last July, with the approval the Ministry of Munitions, are now advertis for applicants. Some 300 students ha already qualified, and of these at least 85 cent. are known to have found employme Students with any mechanical ability, willi to go where required, are now in great dema for skilled work at good wages, and can th render most useful national service if ineligi for military service. The opening up of t new national factories with enormous numb of automatic machines requires the ra training of large numbers of tool-sette King's College has already supplied a la number of such men to various firms, and n machinery has been installed for furtl expansion in this direction.

The Ruins of Arras.

From the British Headquarters in France t special correspondent of the *Times* sends t following notes of a visit to Arras :—"There a some who say that Arras is even more impr sive than Ypres. Perhaps it is. It is certai impressive and terrible enough. It is not great a ruin as Ypres. While it is not easy find a house which still has glass in all windows, or the front of which is not m or less pitted with the marks of rifle a shrapnel bullets, there are whole streets wh are structurally intact. The worst of t ruin here is concentrated in three or fo chief points, the most notable of which are t Place de la Gare, opposite the railway-statio the Petite Place, with the ruins of the beauti Hôtel de Ville, and the neighbourhood of t Cathedral. Each of these points has serv as a constant mark for the German gunn and still so serves to-day. Inside the stati building is a forbidding scene. Though t building is a skeleton of twisted iron and sto with shell-holes among the metals and heap rubbish blocking up the platforms, the inter is perhaps less depressing than the Pla outside. Here is desolation itself, hardly building having anything approaching to intact front. The Petite Place is simp heartbreaking, with the ruins of the beauti sixteenth-century Hôtel de Ville, one of t finest in France. Three only of the sev famous Gothic arches now stand, and ev those are chipped and battered, and likely be more chipped and battered as the days by, for the Germans still persistently torture t beautiful ruin almost every day. More terri even perhaps than the Hôtel de Ville is wh is left of the fine Cathedral of St. Vaa Hardly in Rome itself can you see ruin on more colossal scale."

COMPETITION NEWS.

ist be understood that the following information is as news, and not as an advertisement; and that, ery endeavour is made to ensure accuracy, we cannot nsible for errors that may occur.

The Civic Arts Association:
etition for Memorial Designs—General Conditions.

competition is divided into eight classes, mpetitors may enter for as many classes y please. Each class will be judged by of not less than three chosen by the tive Committee from amongst the ng names:—Messrs. Charles Aitken, ning-Bell, A.R.A., George Clausen, R.A., rl Ferrers, Mr. Graily Hewitt, Professor Image, Mr. T. Stirling Lee, Professor Lethaby, Sir Robert Lorimer, Messrs. Iaclagan, Thomas Okey, H. R. Hope-, Professor A. B. Pite, Mr. F. W. Pomeroy, ., Professor E. S. Prior, A.R.A., Messrs. d Rackham, A. E. Richardson, W. nstein, Charles Shannon, A.R.A., Charles A.R.A., E. Catterson Smith, F. W. Troup, nce Turner, Allan Vigers, Emery Walker, d Warren, W. W. Watts, Lawrence r, Henry Wilson.

awards of the juries will be given to the lesigns. The awards will be final and g, and will not be subject to any appeal. event of all the designs submitted in ass being regarded by the jury as unsatis- solutions of the artistic problem set ht is reserved to withhold the awards.

gns, etc., are to be clearly marked with mber of the class only. No device or re to be used. Accompanying each and attached to it, must be an envelope, with a blank seal, containing name and s of the author, to be opened after the

petitors submitting more than one design end a separate envelope with each.

designs submitted must be entered in me or names of the actual designer or rs. The name of a firm may be appended substituted for the name of the designer.

drawings and models must be delivered e paid at 23A, Maddox-street, on Monday,), between nine and four. The Civic Arts ation will take all reasonable care of the gs and models submitted, but cannot ponsible for loss or damage howsoever

prize designs and such others as may be for the purpose will be exhibited by vic Arts Association at the Galleries of yal Institute of British Architects during ext. The Civic Arts Association reserves ght to exhibit selected designs in the ces after the London Exhibition.

designs to be called for by competitors notified.

ights are reserved to the authors except einafter provided in Classes II. to V.

prizes are independent of any commission e for the use of the design after execution.

Civic Arts Association reserves the right w the publication, within twelve months, design, etc., submitted, and in such the author's name will be given.

gns shall be drawn on stout paper, and not be mounted on card or stretchers, ned or glazed.

lass VI., however, canvas and mounting owed (see detailed conditions).

Detailed Conditions.

Class I.

gn for a monument suitable for erection centre of the members' courtyard at the 'ounty Hall, London [this courtyard is ched from the entrance to the buildings Westminster Bridge-road] in commemor- of those of the London County Council ho sacrifice their lives in the war. The of the prize desires that a cross shall form of the design, and that the symbolism be religious. The general character of nonument should be sculptural rather rchitectural, but with due regard to the of its setting.

vision is to be made for a brief inscription, ot for lists of names. No design will be ered that obstructs too much the view entrance doors from the Westminster e-road.

The London County Council is in no way committed either to the memorial or to the designs which may win the prize, but the Civic Arts Association will submit the prize designs to the London County Council for its consideration.

Competitors are permitted to visit the site in order to study the character of the surrounding buildings; and if further information is required as to the portions of the building not yet completed it may be obtained of the architect, Mr. Ralph Knott, Adelphi-terrace House, Adelphi, W.C. The sketch plan (see p. 352) shows the limit of the size for the base of the monument, viz., 20 ft. in diameter, and it should not exceed 32 ft. in height. The materials should be Portland or Purbeck stone, or stone and bronze, not marble.

The drawings are to include plan and one or more elevations to a scale of ½ in. to the foot, and such other details to a larger scale as the competitors may desire, but not more than two imperial (30 in. by 22 in.) sheets may be sent in. In addition to the scale drawings, competitors may submit a perspective on a sheet not exceeding 15 in. by 22 in., or a model to a scale not exceeding ½ in. to a foot, or both perspective and model.

The following prizes will be given to the best designs:—First prize, £50; second prize, £15.

*Class II.**

Design for a wall tablet in cast bronze, the area not to exceed 4 super. ft. The inscription is not to exceed forty words, and its composition is left to the discretion of competitors, subject to its being in memory of an individual soldier who has fallen in the war. The design may include figures, a coat of arms, or a regimental badge. It must be such that it could be executed for £50, and must be shown by a half-full size plan and elevation, and such full-size details of moulding, lettering, etc., as may be thought necessary, all drawn on one imperial (30 in. by 22 in.) sheet, or a model may be submitted.

The following prizes for the best two designs are offered by Messrs. J. W. Singer & Sons, Ltd., of Frome:—First prize, £20; second prize, £5.

*Class III.**

Design for a wall tablet in carved wood (the nature of the wood is left to the competitor's discretion), the area not to exceed 5 super. ft. The inscription to be in raised lettering and not to exceed fifty words, and its composition is left to the discretion of competitors, subject to its being in memory of an individual soldier who has fallen in the war. The design must be such that it could be executed for £50. It must be shown by a half-full size plan and elevation, and such full-size details of mouldings, carving, lettering, etc., as may be thought necessary, all drawn on one imperial (30 in. by 22 in.) sheet.

The following prizes for the best two designs are offered by Messrs. Martyn, of Cheltenham:—First prize, £20; second prize, £5.

*Class IV.**

Design for a wall tablet in marble or stone, the area not to exceed 6 super. ft. The inscription is not to exceed forty words, and its composition is left to the discretion of competitors, subject to its being in memory of an individual soldier who has fallen in the war. The design should include a coat of arms or a regimental badge, or both, and colour or gilt may be used in the decoration of the tablet. The design must be such that it could be executed for £25. It must be shown by a half-full size elevation, and such full-size details of mouldings, lettering, etc., as may be thought necessary, all drawn on one imperial (30 in. by 22 in.) sheet.

The following prizes for the best two designs are offered by Mr. H. A. Bartlett, Chairman of Messrs. Battiscombe & Harris:—First prize, £20; second prize, £5.

*Class V.**

Design for a simple wall tablet in wood, the area not to exceed 4 super. ft. The inscription is not to exceed forty words, and its composition is left to the discretion of competitors, subject to its being in memory of an individual soldier who has fallen in the war. The design must be such that it could be executed for £10. It must be shown by a half-full size plan and elevation, and full-size details of mouldings, lettering, etc., as may be thought necessary, all drawn on one imperial sheet of paper.

The following prizes for the best two designs are offered by Mr. H. A. Bartlett, Chairman of Messrs. Battiscombe & Harris:—First prize, £10; second prize, £5.

Class VI.

Mural painting for a boy's club. Two prizes of £10 and £5 are offered for designs for a wall painting such as might be carried out in the hall of a boy's club or board school to commemorate those from the club or school who have died during the war.

The subject of the painting may be either religious, allegorical, legendary, or an actual scene in modern warfare.

The painting may be combined with lettering for the names of the members of the club or school.

The exact conditions depend upon the hall selected, but, judging by the mural paintings already carried out in London County Council schools in East London, through the Committee of the Exhibition of Mural Painting and Decoration of Schools and other Buildings, held at Crosby Hall in 1912, a convenient size for the paintings is 12 ft. 9 in. by 7 ft. 3 in.

Two drawings shall be sent in both on imperial sheets, 30 in. by 22 in. (1) A coloured drawing of the whole panel to the scale of 2 in. to the foot. (2) A full-size figure or other detail of some part of the design.

It is undesirable that the designs should be executed in oil painting. They should be definitely of the nature of coloured drawings, and may be in tempera on paper or on canvas, or in water-colour on paper, and must not be framed or glazed, but may be mounted on pasteboard or on canvas and stretcher.

Designs selected for execution should be suitable for carrying out either (*a*) in fresco, tempera, or in some washable material on the walls; (*b*) in oil or tempera on canvas, or in tempera or body colour on paper stretched over canvas, in removable frames.

Class VII.

A fountain, architectural or sculptural, or a combination, for an open site in a country town or village, in memory of the local soldiers who have given their lives for their country in this war. The character of the design is left to the competitor, but the space for the inscription, of about forty words, must be included; it is important that this should be very clear.

Plans of two levels, a section, two elevations, and such other details as suggest themselves to the designer, may be shown, drawn on an imperial sheet (30 in. by 22 in.) to a scale of ½ in. to a foot. A perspective may also be submitted on a sheet not exceeding 15 in. by 22 in., or a model to a scale not exceeding ½ in. to a foot.

The estimated cost of execution not to exceed £200. The following prizes for the best designs are offered by the Right Hon. Charles Booth:—First prize, £20; second prize, £5.

Class VIII.

Inexpensive memorials for the "home." There is a great need for a class of memorial which will be within reach of those whose incomes are very small; at this Exhibition it is hoped to put before the public designs and suggestions of this kind, such as tablets, medallions, frames for Rolls of Honour, and photographs, caskets for mementoes or stands for holding medals, etc.

Competitors should submit finished works, models, or drawings as nearly like the proposed object as possible.

The best submitted will be exhibited in the hope that manufacturers will enter into negotiation with the authors with a view to reproduction.

These inexpensive memorials should be capable of being made in quantities at prices varying from 5s. to £2 each.

Consolation prizes will also be given by the proprietors of *Country Life* on the jury's recommendation.

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* With regard to Classes II. to V. the right to carry out any design submitted is reserved on payment to the designer of a royalty of 10 per cent. on the value of work carried out from design.

Leading Contents.

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ILLUSTRATIONS.

Drapers' Hall.

We illustrate Drapers' Hall, which is described in an article on p. 353. The panels in the Court-room walls are covered with fine old Gobelins tapestry of the date of Louis XV., which has been placed in a position of greater security for the present.

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MEETINGS.

Monday, May 15.

Royal Institute of British Architects.—Ordinary meeting. Nomination of candidates for membership.

Tuesday, May 16.

Egypt Exploration Fund (at the Rooms of the Royal Society, Burlington House).—Mr. W. L. Nash, F.S.A., on "The Egyptian Ceremony of the Coronation of the Pharaoh and its Magical Basis." 4 p.m.

Builders' Clerks' Benevolent Institution (at the "King's Hall," Holborn Restaurant).—Thirty-eighth annual dinner. 6 for 6.30 p.m.

Wednesday, May 17.

Royal Society of Arts.—Mr. Geo. Percival Baker on "Hindu Hand-painted Calicoes of the Seventeenth and Eighteenth Centuries, and Their Influence on the Tinctorial Arts of Europe." 4.30 p.m.

Concrete Institute.—Ordinary general meeting. 5.30 p.m.

Thursday, May 18.

Royal Institution.—Sir Ray Lankester on "Flints and Flint Implements." 3 p.m.

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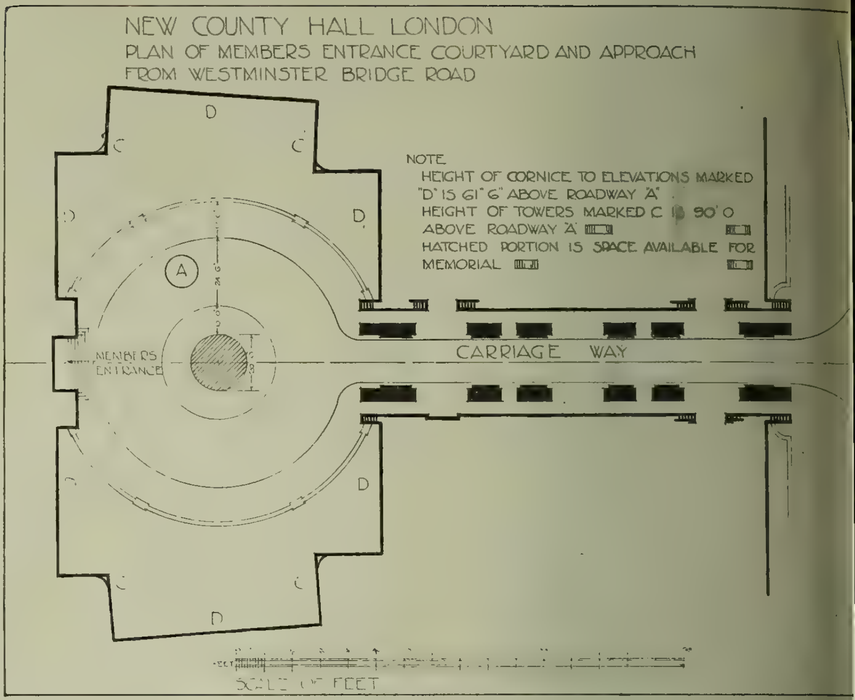
OBITUARY.

Second-Lieut. T. P. Bausor.

We regret to announce the death of Second-Lieutenant Thomas Paul Bausor, who was killed in action in France on April 6. Deceased was the son of Mr. Paul Bausor, architect, of Lark Hall, Fordham, Ely. He served his articles with his father, and was afterwards for a time architectural assistant under the Herefordshire County Council, and later architectural assistant in the Small Holdings Department of the West Riding County Council. Soon after the outbreak of war he joined the Hereford Regiment, later securing a commission in the Shropshire Light Infantry. Mr. Bausor was the author of a lengthy article entitled "Buildings and Dwellings for Small Holdings," which appeared in two parts in our issues of April 23 and 30, 1915, together with illustrations.

Mr. C. Cox.

The death is announced from Eastbourne of Mr. Charles Cox, builder and contractor, formerly of Hackney and Stamford Hill. Deceased, who was in his eighty-first year, was for a long time one of the contractors to the London School Board.



NEW COUNTY HALL LONDON
PLAN OF MEMBERS ENTRANCE COURTYARD AND APPROACH
FROM WESTMINSTER BRIDGE ROAD
D
C
C
D
A
D
NOTE
HEIGHT OF CORNICE TO ELEVATIONS MARKED "D" IS 61' 6" ABOVE ROADWAY "A".
HEIGHT OF TOWERS MARKED C IS 90' 0 ABOVE ROADWAY "A"
HATCHED PORTION IS SPACE AVAILABLE FOR MEMORIAL
MEMBERS ENTRANCE
CARRIAGE WAY
D
C
C
D
SCALE OF FEET

(*See "Competition News," page* 351.)

SCULPTURED PANEL, ST. STEPHEN, COLEMAN-STREET, E.C.

We have received from Messrs. John Daymond & Son, architectural sculptors, carvers, and modellers, of Edward-street, Vauxhall Bridge-road, S.W., the following letter in reference to our article on St. Stephen, Coleman-street, in our issue for April 28 :—"The sculptured panel on the entrance gateway illustrated on page 312 was actually carved by us in wainscot oak in 1892, and is a replica of the original wood panel which was removed to the Guildhall Museum at that period. As the detail is interesting, we have pleasure in enclosing a photograph of our reproduction."

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THE DUDLEY HOUSE SCHEME.

The Dudley Town Council Special Committee have issued a report in reference to the Corporation scheme for the erection of 300 houses. They had accepted tenders by the following contractors :—Mr. William Roe (Wolverhampton), for the erection of thirty houses; Mr. Thomas Higgs (Wolverhampton), fifty-four houses; Messrs. Jenkinson & Davies (Rhondda), forty houses; Dudley Amalgamated Builders (Dudley), ninety houses; Messrs. Rogers & Sons (Cardiff), eighty-six houses; Messrs. Lewis & Taplin (Birmingham), for the construction of new roads and sewers on the Brewery Fields estate (the site of the scheme), and for the widening of Bunns-lane and St. John's-road and the construction of new sewers therein. The total contract prices amounted to £81,045 for the houses and £7,127 for the roads and sewers, compared with the following estimates :—Houses, £84,471; roads and sewers, £9,624.

BOOKS RECEIVED.

Gandier-Brzeska. A memoir by
Pound. (London: John Lane. 12s. 6d.

The Mechanical Handling and Sto
of Material. By Geo. Fredk. Zim
A.M.Inst.C.E. (London: Crosby Lockw
Son. 42s. net.)

The Double Choir of Glasgow Cathe
By Thos. Lennox Watson. (Glasgow: J
Hedderwick & Sons, Ltd. 5s. net.)

Kidder's Architects' and Buil
Pocket-Book. (London: Chapman &
Ltd. 21s. net. New York: Jno. Wiley & S

◆

FIFTY YEARS AGO.

St. Paul's, Deptford.

An inhabitant of St. Paul's writes :—"
could fancifully imagine that a sani
board is an aggregation of antagon
planks. Our poor neglected street, hono
with a noble name—Hamilton—is as it
except indeed that its lower end is '
verdure clad,' but which, alas, no b
scents exhales, but somewhat of the
aroma as did the redoubtable Sanch
the Brown mountains, and which eli
from his master (the Knight of the R
Visage) the rebuke of remonstr
'Friend Sancho, thou smellest not of am
Do, pray, Sir, in the cause of health r
pestilence, give the quiet board a tou
your powerful wand by finding space
notice in your influential journal."

[*** From the *Builder* of May 12, 18
Ed.]

Gateway Panel: St. Stephen, Coleman-Street, E.C.

. . The . .

ty Companies and Their Halls.*

VNTO GOD ONLY BE HONER & GLORY

No. 3.

The Drapers' Company.

E Drapers' Company are third in order f precedence among the Companies, and hroughout their long history have been the most active and influential of the One of the earliest records of the Associa- ntions that the Gilda Panariorum was the Adulterine Guilds amerced in the nry II. (1180). The word "draper" ly meant a maker and not merely a n cloth, being derived from the French , which signified clothwork. In Eng- ney were called drapers and clothiers minately, the term draper being applied e who made and sold cloth in and near , the term clothier to those who brought ale from the country. Thus Stow speaks *clothiers* of England and the *drapers* of . As woollen weavers were decreasing ber, Edward III. prohibited both the of wool to other countries and the of cloth from abroad, and invited s from the Low Countries to settle in l in order that the methods of manu- might be improved. He also gave the s their first recorded charter, which that it had been shown to the King in that numbers of persons belonging to misteries, who had never been appren- r learnt the trade of drapery according good old custom of London, meddled to the enhancement of its price and ouragement of deceits. He accordingly d that none should use the mistery of in the City of London or its suburbs they had been apprenticed thereto or r manner admitted by the consent of ne mistery. Also that the misteries s, fullers, and weavers should keep to roper crafts and not meddle with the , purchase, or sale of drapery under pain risonment and the forfeiture of the r its value. Powers of oversight and were also accorded to the mistery. ember 30, 1438, Henry VI. granted the of Incorporation, which gave the s power to found and establish within y of London a guild or fraternity and a Master and four wardens to oversee overn the fraternity. Other charters ranted in the reigns of Henry VI., l IV., Richard III., Philip and Mary, th, and James I., and the Company n governed by by-laws and ordinances ne year 1322. Women were not only ed to the freedom of the Company, but arry on business and take apprentices, hen they died they were buried and l to the grave with the same rites and nies as the men. In the charter of I. the Company is described as "*Master, s. Brethren, and Sisteren of the Guild or ity of the blessed Mary the Virgin of the of Drapers in the City of London.*" Non-freemen were excluded from the drapers' trade and members were not allowed to employ them, and were enjoined on all occasions to keep the secrets of their craft. Apprentices were kept under strict discipline, and it is recorded that one John Rolls, having been guilty of a grave offence, was brought before the Master and Wardens on a Court day, and, the case being proved, two tall men, their features concealed by hoods, entered the room "with two peneworth of birchen rodds and there—w^{t} owten any word spekyng they pulled off the doublet and shirt of the said John Rolls and there upon him (beyng naked) without they spent all y^{e} seid rodds for hys said unthryfty demeano^{r}."

The charter of 17 Henry VI. recites several statutes of Edward III. and his successors relating to the subsidy on cloth, the sealing of cloth by the Alnager, the fixture of the dimensions of cloth, the form of the alnage and subsidy, and of a moiety of forfeitures of unsealed cloth, and reinforces their provisions appointing persons to enforce the law with power of search over all houses and shops in the City and its suburbs. The second of two charters granted by Edward IV. guarantees the Drapers against any concession of a charter to the shearmen, from whom it withdraws the right of search, correction, and authority over other trades, especially those of the Drapers and Taylors, unless such rights should be conceded by the Lord Mayor and Aldermen. The first of the two charters granted by James I. in 1607 enacts that, while the Master and four Wardens were to be annually re-elected, the assistants should hold office for life unless removed for some special reason. The Master and Wardens were to be chosen by a selected body of twelve assistants, all of whom must have been Past-Masters or Wardens, provisions which gave the constitution an unusually oligarchical character. Each Past-Master or Warden was *ex officio* an assistant for life. The second charter of 1619 enumerated their possessions, for which they obtained the royal acknowledgment with peaceful possession for ever and a full indemnity for all acts done in the past on payment of a fine of £206 and the reservation of rights held by the Crown.

As Cheapside was the quarter of the Mercers and Sopers-lane that of the Grocers, the Drapers mainly congregated in Cornhill, and after the coming of the Flemish weavers spread into Candlewick ward, along Birchin-lane, and almost, if not quite, as far as Stocks Market.

About the year 1397 Blackwell or Bakewell Hall was established in Basinghall-street as a centre for the sale of woollen cloths, the condition of admittance being the payment of certain tolls or dues. An attempt was made to give the Drapers of London the monopoly of sale there, but the municipality interfered and opened its doors to all traders. Under the first Mayoralty of Sir Richard Whittington the Ordinances of Bakewell Hall were first drawn up for the proper control of foreign drapers or clothiers. It was laid down that they could offer their goods nowhere else and only from noon on Thursday to noon on Saturday, and they were only allowed to sell whole clothes and half clothes. In 1405 the Drapers' Company obtained the right of nominating the keeper, subject to the approval of the Court of Aldermen, and for two centuries the London Drapers enjoyed profitable facilities there for the disposal of their goods; but the gradual withdrawal of members of the guild from an active share in business, the effect of the Orphan Act of 1697, and the development of commerce outside the City on more modern lines brought about a change in the methods of conducting business.

In the *Little Gest* of Robin Hood the Draper is represented as being a salesman, in contrast to the Shearman or Clothworker, and in a passage relates how Much, the miller's son, watching Long John measuring out cloth without nice regard to quantity, asks him :—"What devils kin draper" is he that he uses no "better rule"? It may be assumed that the guild sold goods in the piece or by the yard as well as in the made-up form. The "linen-draper" was at first a distinct business of itself, as for long the use of the fabric was hindered by the difficulty which foreign manufacturers experienced as compared with the English dealers in wool. An Act for burying in woollen fabrics was passed as late as 1678, and the interment of the actress, Mrs. Oldfield, in a Holland shift is noted in 1730 as a remarkable occurrence; but the Drapers, like many other of the great Companies, ceased to have a practical connection with the trade which gave them their name and wealth as modern conditions brought with them changes which rendered their task of trade superintendence unnecessary.

The earliest accounts in the possession of the Company date back to 1415, in which year the number of members exceeded 100, the income of the year being £37 15s. 6d., derived from the rent of houses, assessment for processions, fees for apprenticeship and freedom, and for fines and quarterage. The expenditure for the same period was £23 12s. 6d., which includes the beadle's salary, the expenses of the trade searches, payments to chaplains, and repairs of houses, as well as payments for minstrels, hire of horses, and other items. The fees for the admission of apprentices increased from 3s. 4d. in 1476 to 20s. in 1498, in which year thirty-five were admitted. The records contain numerous accounts of the part played by the Company in royal processions or pageants. When Henry VII. made a triumphal entry into London after his victory over the northern rebels, and also on the Coronation of the Queen, the Companies were called to add to the splendour. In reference to the first of these occasions the entry occurs, "Remembrance, that the crafts was cessed for xxx persones to ride to sette in the Kinge; whiche cessing draweth to the Somme of xv^{li} vj^{s} ij^{d} whereof

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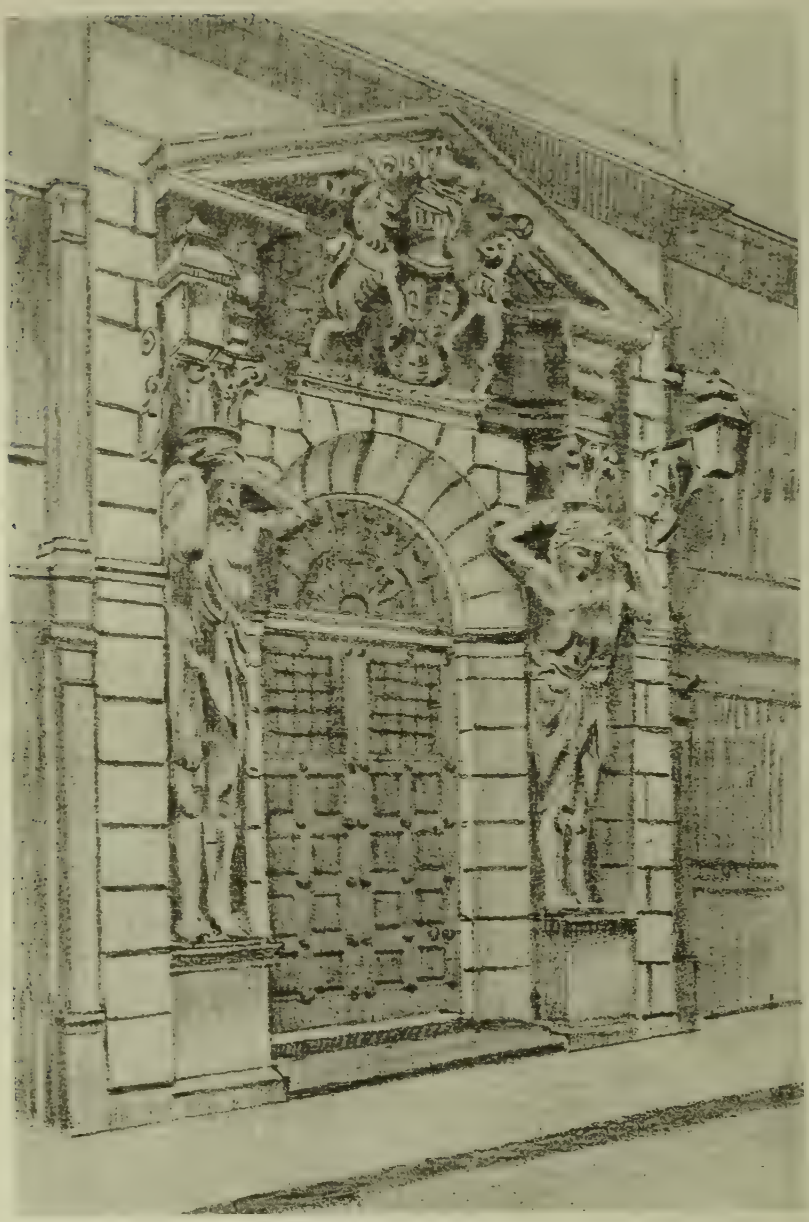
rticie on the Mercers' Company appeared in e of March 31 and one on the Grocers' on April 28.



Drapers' Hall : Main Entrance, Throgmorton-Street.

we receyved but the Somme of xij ix ij," from which it appears the fraternity were out of pocket by the observance of their loyal duty.

In 1521 the Drapers took a leading part in settling the terms and amount of contributions which the Government required for the furnishing of ships of discovery to be placed under the command of Sebastian Cabot. The Wardens of "divrs of the auncyant felishippes" assembled at "Frers Austyn," and practically adopted the Drapers' Company answer as their own. The Drapers told the King's Council that they had no authority to bind the whole Company to any such charge and described the condition of their trade—their Company consisted of but "fewe adventurers saving only unto Flanders whereuntoe required noe grote shippes"; yet if it pleased the King to cause to be manned, rigged, apparelled, and victualled "such a ship as the Company should think convenient, the Wardens would apply themselves and labour their said Company to freight and lade the same to the best of their power, having such a reasonable price of the freight as other shipps had in usuage and lading."

The intended voyage seems to have been to Newfoundland, which had been first discovered in 1491 by John Cabot, Sebastian's father, whose ships were furnished by the London merchants. The Drapers did not like the venture, and pointed out that neither the land to which the vessels were bound nor the "seey thitherward and homeward" was known, that it was a "sore adventure to jepard ye shipps with men and goods unto the said island upon the Singular trust of one man alone," who, as they had heard, was never in the land himself. They finally submitted on a message "fro my Lord Cardynall," "that the King would have the promises performed and would have no nay therein."

The suppression of the monasteries is first hinted at in an entry in the year 1538, stating it to have been agreed "as touching the purchasing of suppressed lands that this house shall not be hasty for doubts that may be thought to depend on the same, for holding of the Kyng, as by knights service or such other like, untill it be discussed by learned counsell." In 1545 the Company completed the purchase from Henry VIII. of the site—their present site—which had come to the Crown by the attainder of Cromwell, Earl of Essex, whose residence it had been. They were required to submit a general account of their chantries, and defined the heads of an agreement as to those they were left to maintain. The Company rallied with unusual rapidity from the damages and losses occasioned by the Fire, and in Maitland's "History of London," written in 1756, it is recorded that the Company spent yearly in charities a sum of £4,000, an amount in excess of that of any other Company.

Many eminent men and families have been connected with the Company or trace descent from members of the fraternity, among whom are the Pulteneys, Earls of Bath; the Capels, Earls of Essex; and the Brydges, Dukes of
Chandos ; and they have included among t
members many who have been distingui
for their municipal energies and benefact
Among notable members of the Company
John Hind, Mayor in 1405, restorer of
Swithin's Church, whose house in St. Swith
lane was the first Hall of the guild and is
its property ; Sir Simon Eyre (1446), the fou
of Leadenhall Market and donor of 8,000 m
for the relief of the poor ; Sir George Mon
who expended large funds at Walthams
Thomas Howell, the founder of Howell's
cational charities ; Alderman John Lam
who endowed Queen Elizabeth's Colleg
East Greenwich ; Sir Robert Clayton (1
Lord Mayor, who built a portion of Ch
Hospital, and many more might be adde
the list.

The Company's first Hall in St. Swith
lane was known as John Hind's House in
and from accounts preserved must have
an important building. The dining hall h
raised dais, where the high table was pla
Here the Master and Wardens sat "next
cupboard," while at a table next the pa
door guests of the Master and Wardens m
sit. No member of the fraternity was entitl
seat himself at the general board until t
at the high table were washed and seated.

There were a ladies' chamber, used by
ladies of the Company, where they somet
dined apart, and a kitchen with three
places ; in addition, there was a chekker
for "maydens." More usually the l
dined together with the men, and it is rec
that Edward IV., in 1479, sent them a pr
of two harts, six bucks, and a tun of wine,
the Lady Mayoress entertained the Alder
wives at Drapers' Hall.

The grant of arms was made to the Com
in 1439, and are thus described :—*Azure* T
clouds radiated *proper* each adorned wi
Triple Crown *Or* Supporters Two Lion
pelleted *Crest* On a wreath a Ram cou
Or ; armed *sable* on a mount *Vert.* M
"Unto God only be Honour and Glory."

Cromwell House, which served the Com
for a Hall until its destruction in the Fi
London, is shown in old illustrations as h
a castellated front with towers and gat
flanked on either side by gabled houses
the archives of the Company it is state
including :—*Imprimis a fair great ga*
great winding stair with bay glass wi
leading into the hall ; Item over that stai
leads ; Item a fair hall with two bay wi
and clerestories, with a buttery, a pantry, a
for wine, ale, and beer ; Item a dark ch
with lattice over the said buttery and p
to look down into the hall ; Item a fair
parlour with bay glass windows and a fair
ney ; Item a buttery with a clerestory,
within the said buttery a jewel house.
accommodation provided included a kit
pastry house, scullery house, two larder h
a coal house, and further rooms on the s
and third stories. Besides the house
were great gardens, of which the present
garden next to Throgmorton-avenue i
sole remainder. The block of offices kno
Drapers'-gardens cover what was once a p
the gardens of Cromwell House. The g
was in part thrown open to the public
the Great Fire, and Ned Ward, in the "L
Spy," refers to it as a fashionable prom
for "an hour before dinner-time." The g
contained a pond, fountain, and trees,
well-laid-out walks, and was about 400
length. It adjoined a garden belongi
the Carpenters' Company, but by an ar
ment between the Companies in 1873 th
was built on.

After the Great Fire, Jarman, the
Surveyor, who acted as architect for so
of the City Companies, prepared a mod
a new Hall, which was carried out fro
designs by Cartwright Mason. The bui
were like those of the present stru
arranged round a large open courtyard
columned loggias under. The Hall, a
but richly-panelled room, occupied pa
the space covered by the existing livery
but its dimensions were only about 60
30 ft. South of this Hall was the main sta

In 1774 a fire occurred, and the fr
Throgmorton-street was rebuilt unde
directions of the Brothers Adam, while be

1868-69 the greater portion of the
was again remodelled under the
of the late Herbert Williams, Surveyor
npany, and his successor, Mr. Charles
'he Hall had become too small for the
of the Company, and in the necessary
tion much work of an interesting
which would in these days have been
preserved, was swept away, and
tely no record remains of the great
arman's building. The structure of
-room and northern part of the
uilding mainly belong to the original
as designed by Jarman; but modern
is have spoilt the original character of
dining-room and other of the older
remaining. The Court-room was
d when the Adam front was built,
ceiling and fireplace have been added,
this, which would otherwise be the
resting part of the older structure,
rk of different periods. The room
me very handsome panels of Gobelins
f the date of Louis XV.

the destruction of the older buildings
y Jarman is to be much regretted,
n of the present courtyard has
ed with reserve and dignity, which,
g the epoch, is noteworthy. The
ll is a finely-proportioned room of
nensions, and the semicircular end
acter and interest to the composition.
of reception-rooms surrounding the
forms a dignified composition, suggest-
ion, quiet, and ample space, and a
hange from the crowded thorough-
to which the site abuts. Further
were necessitated when the spaces
side of the central entrance from
on-street were converted into com-
emises, and the new work, consisting
d staircase and the main entrance
ogmorton-street, was designed by
s Jackson, R.A. The treatment of
se is pleasing and interesting, both the
ll treatment and the curved plaster
r being characterised by refinement
edge of detail. This work was carried
-99. As it will be seen, there is very
e Hall which is old, and whatever
al features the older part of the
ossessed have been altered and
; but the present lay-out of the
ooms and the quadrangle under
th dignity and a pleasant charm,
rve to perpetuate the traditions of
tructure raised after the Fire.

Companies exercised many of the
which are now discharged through
nd national agencies—they developed
tected and controlled those who
different branches of industry or
le the Crown, when in need of money
l and private purposes, frequently
se to the Companies for loans, which
any cases not repaid. Only by wise
tion and the rising value of pro-
the Companies able to maintain
of solvency, helped by loyalty
embers, who often left property
and who often showed their
by leaving bequests for special
them in trust. They have through-
history, especially in recent years,
sums of money out of their corporate
promote education and support
By such means our educational
been supplemented through the
of large sums which would in
never have been given to any
s, for through many centuries the
the various Companies show the
d esteem in which they were held
mbers.

find that the Drapers have founded
ses—the Queen Elizabeth's College
h, founded and endowed by William
1575, which supports forty alms-
Bruce Grove Almshouses at
founded under the wills of John
681, Sir John Jolles in 1617, and
manson in 1695; the St. Mary,
Almshouses, twenty-four in number;
ge, Southwark, Almshouses, sixteen
; the St. Leonard's, Shoreditch,
at Wood Green, which were
1658 and 1725; and the Lucas
Hospital, Wokingham, founded under a bequest dated 1663. The Company also administer various apprenticeship and pension trusts.

Several large and important schools, amongst which are Bancroft's School at Woodford, Essex, founded under a will dated 1727; the Thomas Corney's School at Tottenham; Howell's School for Girls at Denbigh; and a number of exhibitions are also directly administered by the Company, which by new buildings and in other ways has frequently added to the benefactor's munificence.

The Drapers are also connected with many other institutions and foundations, and have seats on the governing bodies in recognition of sums they have given. Among these are the Sir William Boreman Foundation, the income of which maintains 100 boys in the upper division of the Greenwich Hospital School. They are selected by examination from boys attending public elementary schools in Greenwich. The Kirkham Grammar School, Howell's Glamorgan County School at Llandaff, University College, London, and the University Colleges at Bangor and Cardiff, to which the Company has presented libraries costing £15,000 each, the Universities of Sheffield and Leeds, and the Whitechapel Art Gallery are institutions to which the Company has given support.

But the most important and useful work which the Drapers have done for education is probably that in connection with technical education. It was amongst the Companies which subscribed towards the foundation of the City and Guilds Institute, which marked the commencement of a movement for the furtherance of technical education in England, and, though it broke off its connection with the City and Guilds Institute in 1888, it was with a view of undertaking other and much-needed duties of a similar kind. The institution with which it is specially connected is the People's Palace in the Mile End-road, which was the outcome of Sir Walter Besant's imagination and enthusiasm, but which, with the support and direction of the Company, now forms a very valuable educational unit in a district in which it is most required. The recreative side consists of the Queen's Hall, where concerts and entertainments are provided; a Winter Garden, given by Lord Iveagh; and a recreation hall, to which is now added an evening play centre for children. The educational section is now known as the East London College, where a full course in arts, science, or engineering can be obtained for 10 guineas per annum. The College course is taken by over 200 day and 130 evening students, and the degrees obtained by students are evidence of the value of the educational facilities afforded. The whole of the educational buildings have been erected at the cost of the Company, which also contributes £9,000 a year towards the College and awards scholarships. Altogether the Drapers' Company have contributed over £280,000 towards this great educational and philanthropic work. The support of the Company is given to the Department of Agriculture at Cambridge; the Department of Applied Science at University College, London; the Mining Departments at Sheffield and Leeds; and the Engineering Departments of the University Colleges of North and South Wales. The Drapers' Company thus has given a wide support to technical and general education; while the Clothworkers' Company have confined their attention more especially to the technical processes in connection with the dyeing and weaving industries.

It will be seen from our brief review that an association originally formed to safeguard and advance the interests of a special trade now fills what is in reality the more important part of a great educational department, administering a large income, for the most part consisting of funds as to the allocation of which they are unfettered, for the promotion of the public and national welfare, and the work of such a body cannot fail to be of the greatest potential value in our educational system. Added weight and interest are afforded to the cause of education by the voluntary support and independent action of a community of private individuals whose work is inspired by enthusiasm and a desire to further the public good.

LAW REPORT.

Action against a Building Committee: New Church at Laira, Plymouth.

In our last issue we gave a brief report of an action which arose out of the erection of St. Mary's Church, Laira, Plymouth, commenced at the Western Law Courts recently. The plaintiffs were Mr. John William Hamilton and Messrs. Pethick Bros., contractors, and the defendants, the Church Building Committee.

Plaintiffs claimed the sum of £952 3s. 7d., balance of amount for work done by Messrs. Pethick Bros. and for goods supplied, damages for alleged wrongful repudiation of contract, and delivery of plant and material belonging to Messrs. Pethick Bros., or damages for its detention. Defendants denied liability, and counterclaimed £303 11s. 11d. as liquidated damages for non-completion of contract.

The case came before the Official Referee (Mr. E. Pollock, K.C.), and counsel engaged were: For the plaintiffs, Mr. A. A. Hudson, K.C., and Mr. Arnold Inman, instructed by Messrs. Soames, Edwards, & Jones, London; for the defendants, Mr. Clavell Salter, K.C., and Mr. H. Geen, instructed by Messrs. Prance & Prance, Plymouth.

Counsel for the defendants, in the course of his opening statement, said the contractors largely confined their energies to asking for money. In September, 1911, they were already getting behind, and were being pressed to show more promptitude and despatch. The contractors gave as one reason that they were unable to obtain Bath stone, but the trouble was that they could not pay for it. Pethick Bros. were "hard up," and were continually pressing the architect for a certificate for payment, and the architect strained his discretion and let them have it in driblets. The contractors did not make any real attempt to do the work in accordance with the contract; they were trifling with it. As the time for completion approached letters were written to the contractors complaining of the "extreme dilatoriness" of the work and the insufficient number of men employed, and warning them that if the contract was not completed to time the penalties incurred would be enforced. With reference to the point that the work was interfered with by the cutting of a new road by the local authority, making it necessary for the contractors to gain access to the site by an alternative route, the impediment was a very small one, for one route was practically as good as the other.

In consequence of the slow progress of the work the architect declined to exercise further his discretion to issue certificates for less than £250. The contractors subsequently gave notice that unless they received the payment demanded they would stop the work. On August 30, 1912, the contractors, who had been treated with extraordinary forbearance, were given notice under Clause 26 that unless they proceeded with the work with reasonable expedition and despatch the contract would be determined. The plaintiffs contended that Clause 26 could not be put in operation if a certificate was withheld by the architect when due. The only question was whether the architect was of opinion that, having regard to the way in which the work had been done and the amount of work done, a certificate for £250 should be withheld. The architect was of opinion that he ought not to certify, and he refused to do so. The question for the Official Referee was not whether the architect was right in his opinion, but only whether he was honest in his opinion. After receiving the notice under Clause 26 the contractors failed to hasten the work, and it was obvious that they could not get credit from a slate company. They therefore suggested that another firm should do the slating, but the architect replied that he could not consent to the transfer of part of the contract to someone else.

Evidence was given by the clerk of works, Mr. W. Martin; the architect, Mr. T. Rogers Kitsell; and others.

Mr. Hudson, in his final reply, described as "absurd tarradiddle" the architect's statement that he made deductions from the amounts due to the contractors because of faulty work.

Counsel completed his address in London. The arbitration was concluded in the Official Referee's Court on Monday last. The proceedings consisted mainly of the summary of evidence and arguments already adduced.

Summing up, the Referee conceded all the principal points of the plaintiffs' case.

Judgment was given for plaintiffs for £816 11s. 11d., with costs, and also on the counterclaim, with costs.

THE BUILDING TRADE.

THE LUMSDEN JUDGMENT.

UNDER this title the *Land Union Journal* for April, 1916, publishes an article by Mr. E. P. Hewitt, K.C., which contains a suggestion of interest to the building trade.

The author, after a short review of the case in question, remarks that if it be taken for granted, according to the rule adopted in the Lumsden case, that the statute requires a new gross value to be ascertained on the occasion, it follows that where it is found as a fact that the gross value on the occasion is smaller than the purchase price, while the full site value is the same as the original full site value, increment will appear. He then points out that the simplest way of avoiding the difficulty caused by the decision in the Lumsden case is for landowners to resist attempts by official valuers to put the gross value on the occasion of a sale at a figure lower than the purchase price. To find out what price a property actually will fetch must be the best mode of ascertaining its market value. Such a test is superior to the estimate of any surveyor, however eminent; and the contention that the "fancy price," as it is sometimes called, which an individual (*e.g.*, a next-door neighbour) may for special reasons be willing to give, should be disregarded is unsound.

In support of this view he quotes the decision in Inland Revenue Commissioners *v.* Clay and same *v.* Buchanan ([1914], 1 K. B. 339; 3 K. B. 466), in which a higher price was paid for a property adjoining a nurses' home by the trustees of the latter because they wanted to enlarge the accommodation of the home. The decision was upheld in the Court of Appeal. The Master of the Rolls in the course of his judgment said: "An 'open market' sale of property 'in its then condition' presupposes a knowledge of its situation with all surrounding circumstances.

"To say that a small farm in the middle of a wealthy landowner's estate is to be valued without reference to the fact that he will probably be willing to pay a large price, but solely with reference to its ordinary agricultural value, seems to me absurd. If the landowner does not at the moment buy, land brokers or speculators will give more than its purely agricultural value with a view to reselling at a profit to the landowner." And Mr. Swinfen Eady, L.J., in his judgment said: "The market is to be the open market, as distinguished from an offer to a limited class only, such as the members of a family. The market is not necessarily an auction sale. The section means such amount as the land might be expected to realise if offered under conditions enabling every person desirous of purchasing to come in and make an offer, and if proper steps were taken to advertise the property and let all likely purchasers know that the land is for sale."

The author remarks that this decision is of the very first importance, and places any owner of land in a strong position for requiring, in any ordinary case, that the figure at which the gross value of his property is put, for the purpose of arriving at the site value on the occasion of a sale, shall not be less than the purchase price; and, in cases where the property is subject to fixed charges or restrictions, that the gross value on the occasion shall be put at a higher figure than the purchase price.

If landowners adopt this attitude and insist upon the rule laid down in the cases of Clay and Buchanan being adhered to any hardship arising from the decision in the Lumsden case will, in practice, be reduced to very small dimensions.

THE SURREY TILE.

With reference to the notice of the Surrey Roof and Weather Tile, which appeared in our issue of April 28, in mentioning the principle of the invention we referred to the "interspace" tile; this should read as "inter-tile-space."

NEW GOVERNMENT CONTRACTS.

War Offices.

Bricks (Term Contracts).—B. J. Forder & Son, Ltd., Pillinge Brickworks, Wootton, Bedford; London Brick Company, Ltd., 14, Archway-road, Upper Holloway, N.; Smeed, Dean, & Co., Ltd., Sittingbourne, Kent.

Buildings, Sectional.—Humphreys, Ltd., Knightsbridge, S.W.

Cement.—Associated Portland Cement Manufacturers, Ltd., Northfleet, etc.

Cistern, Galvanised.—Wilmot & Co., Ltd., St. Philip's Marsh, Bristol.

Cranes and Parts.—Butters Bros. & Co., Percy Works, MacLellan-street, Glasgow; Grafton & Co., Ltd., Vulcan Works, Bedford; Stothert & Pitt, Ltd., Bath.

Erection of—Buildings at Castle Bromwich: A. J. Lord, Woolston Joinery Works, near Coventry; buildings at St. Albans: Wm. Saint, Railway Building Works, Cambridge; fencing at East Wickham, Eltham, and Abbey Wood: T. W. Palmer & Co., Church-road, Merton Abbey, Surrey; huts at Gadebridge: E. Wiggs & Sons, 90/92, St. Albans-road, Watford; power-house and equipment at Wigton: Girdleston & Co., 23, Davies-street, S.W.; sheds at Hilsea: J. Lysaght, Ltd., Bristol; sheds at Netheravon: W. E. Chivers & Sons, Devizes; sheds at Northolt: Fassnidge & Sons, Uxbridge, Middlesex; shelters at Weybourne: Blyth & Son, Railway-road, Sheringham; steel buildings at Milton: Braithwaite & Kirk, 117, Victoria-street, S.W.; steel sheds at Erith: W. F. Blay, Ltd., Woolwich; stores, etc., at Northolt: Fassnidge & Sons, Uxbridge, Middlesex; provision of blinds, etc., at Woolwich: D. Davies & Co., 1, Green's-end, Woolwich; supply of steelwork at Woolwich: Powers & Deane Ransomes, Ltd., Cubitt Town, E.; supply of steelwork at Woolwich: Dorman, Long, & Co., Middlesbrough.

Gas, Acetylene (Term Contracts).—Acetylene Illuminating Company, Ltd., 268/70, South Lambeth-road, S.E.; Allen Liversidge Portable Acetylene Company, 106, Victoria-street, S.W.

Grindstones, etc.—Falkirk Iron Company, Ltd., Falkirk, Stirlingshire; J. Hughes & Sons, Trafalgar Wharf, Church-row, Limehouse, E.

Hinges.—T. Crompton, North Ashton, near Wigan; London Pressed Hinge Company, Millwall Docks, E.; T. Sanders, Ltd., St. Mary-street, Ladywood, Birmingham; Tonks, Ltd., 201, Moseley-street, Birmingham.

Lamps, Electric.—Brimsdown Lamp Works, Ltd., Brimsdown, Middlesex; Bulpitt & Sons, Ltd., Swansea Works, Birmingham; Dick, Kerr, & Co., Ltd., Abchurch-yard, Cannon-street, E.C.; Edison & Swan United Electric Light Company, Ltd., Ponders End, Middlesex; E. Griffiths & Sons, Beacon Works, Bradford-street, Birmingham; A. Lyon & Wrench, Ltd., Victoria-road, Willesden Junction, N.W.; Siemens Bros.' Dynamo Works, Ltd., Tyssen-street, Dalston, N.E.

Pumps.—Duke & Ockenden, Ltd., Ferry Wharf, Littlehampton.

Railway Plant.—Anderston Foundry Company, Ltd., Port Clarence, Middlesbrough; Guest, Keen, & Nettlefolds, Ltd., London Works, Smethwick, Birmingham; R. Hudson, Ltd., Gildersome Foundry, near Leeds; McKenzie & Holland, Ltd., 58, Victoria-street, S.W., and Worcester; Skelton Iron, Steel, and Coal Company, Ltd., Stoke-on-Trent; T. Summerson & Sons, Ltd., York-street, Darlington.

Rollers, Steam.—Ruston, Proctor, & Co., Ltd., Lincoln.

Roofing, "Rubber."—F. McNeill & Co., 36, Wapping, Liverpool.

Rope, Wire.—Binks Bros., Ltd., Strafford-street, Millwall, E.; Bullivant & Co., Ltd., Millwall, E.; Craven & Speeding Bros., Sunderland; E. Ellis & Co., Ltd., Alpha-road, Millwall, E.; Glaholm & Robson, Ltd., Hendon-road, Sunderland; R. Hood, Haggie, & Son, Ltd., Willington Quay, Northumberland; Rylands Bros., Ltd., Warrington; Warrington Wire Rope Works, Ltd., Bewsey-road, Warrington.

Sheets, Corrugated, Steel.—J. Summers & Son, Ltd., Shotton, Chester.

Steel, Constructional.—Dorman, Long, & Co., Ltd., Middlesbrough; Frodingham Iron and
Steel Company, Ltd., Scunthorpe.
Horeshay Company, Ltd., Horsehay
shire.

Stoves.—Albion Iron Company
Ltd., Larbert, Stirlingshire; Carron
Carron Works, Carron, Falkirk; S.
Co., Ltd., Old Town Foundry, Leami

Tanks.—Baldwins, Ltd., 3, St. Hele
London, E.C.; F. Braby & Co.,
Works, Deptford, S.E.; Davies Bro
Ltd., Crown Works, Wolverhamp
Francis & Sons, Ltd., Trundleys-roa
ford, S.E.; Lancaster & Co. (Bow), L
cock-road, Bromley-by-Bow, E.; Lle
James, Ltd., Castle Green, Bristol; J.
Ltd., Bristol; Manwood, Miller, &
Valley, Dukinfield.

Tools.—Alldays & Onions Pneum
gineering Company, Ltd., Birmingha
Andrew & Co., Ltd., Toledo Stee
Sheffield; C. A. Argyle & Co., 5,
lane, Sheffield; A. Ashton & Sons, Lt
Tree Works, Sheffield; Atkin & S
Rea-street South, Birmingham; G. B
Sons, Cornish Works, Sheffield; A.
Co., 57, Scrutton-street, E.C.; C.
Kunzden Brook, Blackburn; Bear
West, Stimpson-avenue, Northampto
Birkinshaw & West, Reliance Works
hampton; T. E. Bladon & Son,
Northwood-Street, Birmingham;
Blakeley & Sons, 165, Napier-street,
J. Blyde & Co., Rutland-road,
Bowley, Preece, & Co., Ltd., 242, Br
Birmingham; S. Briggs & Co., Lt
street, Burton-on-Trent; F. J. Br
Sons, River-lane, Sheffield; H. Brin
Summer-lane, Birmingham; British
Engineering Company, Ltd., Owen-r
verhampton; W. Brookes & Sons.
Works, Sheffield; J. Brooks (Ly
Brooks-street, Lye; Brooks & Cook
hole Forge, Sheffield; J. Brown,
Works, Halesowen; Burys & Co., R
Philadelphia Works, Penistone-road,
Cannon Iron Foundries, Ltd., Deepfi
Bilston, Staffs; Carr, Wild, & Co., L
ton-street, Sheffield; Chater Lea, Lt
Banner-street, E.C.; J. Chesterma
Ltd., Bow Works, Sheffield; S. A
Ltd., Lion Works, Edward-street-pa
mingham; F. A. Davis, Ltd., Brooke
Brooke-street, Holborn, E.C.; J. Di
sall), Ltd., Ablewell Works, Able
Walsall; Douglass Bros., Ltd., B
Tyne; Drabble & Sanderson, Ebened
Sheffield; Easterbrook, Allcard, &
Albert Works, Sheffield; T. R. Ell
Croft, Sheffield; J. H. Ellis &
Queen's-road, Sheffield; E. Elwell, I
nesbury; J. Evans & Sons, Ltd., Hig
and Steel Works, Sheffield; Farring
and H. Pontifex & Sons, Ltd., 43/4,
E.C.; Fox Bros. (Sheffield), Ltd., He
Sheffield; T. J. Gardner, Narrow W
Bristol; C. Garlick & Sons, Lyn
Sheffield; W. Gilpin, Senr., &
Churchbridge, Cannock; Guest,
Nettlefolds, Ltd., Smethwick, Birmir
& J. Hall, Hereford-street Works,
W. Hall (Sheffield), Ltd., Alm
Sheffield; W. Heap & Co., Ltd., Ash
Lyne; Hearnshaw Bros., John B
Sheffield; Herring Bros., 143, New
N.; A. Hildick, Rutland-road,
Howes & Burley, Ltd., Holloway
mingham; W. Hunt & Sons (Th
Ltd., Brades Steel Works, Birmingha
soll-Rand Company, Northenden-r
Manchester; Kimberley's (Birmingh
Dominion Tool Works, Balsall H
Birmingham; Kitson Empire Ligh
pany, Ltd., Stamford, Lincs;
Heaton, Ltd., 315, Long-acre, Ne
mingham; J. Levick, 149, Alma-str
Birmingham; H. G. Long & Co.,
Hallamshire Works, Sheffield; E. &
Ltd., Dronfield Forge and Sho
Dronfield, Sheffield; R. Marples &
Aizlewood-road, Sheffield; W. Marp
Ltd., Hibernia Works, Sheffield;
& Son, Shoreham-street, Sheffield;
son & Sons, Ltd., 11, East Cam
Glasgow; Maxime & Co. Ltd., 6/1
stone-street, City-road, E.C.; Me
Ebor Works, North-street, York;
Co., Woodhouse Mills, Sheffield;
Phillips, & Co., Ltd., Cambrian
Works, Llantrisant, Glam; I. Na

aston Mills, Stourbridge; Needham,
yzack. Ltd., Milton-street, Sheffield:
& Sons. Ltd., 8/9, St. Mary's-row,
m: J. Nicholls & Sons, All Saints'-
lverhampton: Norton & Gregory,
kidge-avenue, Harlesden, N.W.; C.
o., 48. Finsbury-pavement, E.C.; J.
Garden-street, Sheffield; W. Park &
gton Forge, Wigan; A. & F. Parkes
.. Coldfield Works, Dartmouth-street,
m: Patent Stone Dressing Tool
Ltd., Wicker-lane, Sheffield; J.
o., Ltd., Merchant Works, Rutland-
field: J. H. Peace & Sons, Button-
field: S. Peace & Sons, Ltd., Well
reet, Sheffield; W. K. & C. Peace,
e Works, Mowbray-street, Sheffield:
rson & Co., Hope Works, Sheffield:
Sons, Ltd., Wolverhampton; Port-
nace and Patent Company, Ltd.,
. Nottingham; E. Preston & Sons.
ston-road, Birmingham; J. Rabone
d., Hockley Abbey Works, Birming-
ichardson Bros., Matthew-street,
E. T. Roberts & Lee, 563, Seven
d, N.: J. S. Rock & Sons, Beecher
adley, Staffs; Rowland, Brindley, &
all-lane, Sheffield; Sanderson Bros.
ld, Ltd., Newhall-road, Sheffield; J.
ons (Wolverhampton), Ltd., Wolver-
Slack, Sellars, & Co., Ltd., Town-
ks, Neepsend, Sheffield; J. & D.
l. Leopold-street, Birmingham; T.
& Sons, Clarendon Works, Blox-
sall: R. Sorby & Sons, Ltd., Trafal-
Sheffield; Spear & Jackson, Ltd.,
orks, Sheffield; Staffordshire Edge
pany, New King-street, Dudley; G.
17, Lupin-street, Birmingham;
and Joseph Hampton, Ltd., Wednes-
H. Swift & Sons, Ltd., Penistone-
ffield: C. Taylor's Sheffield Tools,
op-street, Sheffield; C. Thomas &
Aston Manor, Birmingham: S.
Sons, Ltd., British Mills, Redditch:
Timperley, Prospect-road, Heeley,
Turley & Williams, Ltd., Reliance
een-street, Birmingham: W. Tyzack,
urner, Ltd., Little London Works,
J. Tyzack & Son, Ltd., Valley-road,
W. Wain, 37, Porter-street, Shef-
rd & Payne, West-street, Sheffield:
Steel Company, Wadsley Bridge,
C. Whitehouse & Sons, Ltd., Can-
hitehouse Bros., Ltd., Cannock,
nittam & Co., Cornbrook Park-road,
d, Manchester; J. Wilkinson, Junr.
Ltd., Freebodies Works, Dudley; H.
Son, Lark-row, Cambridge Heath,
ilson & Frith, 35, Eldon-street,
G. Wingrove & Son, 85, Floodgate-
mingham; G. Wolfe & Sons, Ltd.,
ian Works, Bathgate: F. Wood &
rpe Works, Henry-street, Sheffield:
mmins, & Co., Ltd., Commercial-
mingham: J. Yates & Co., Ltd.,
nor, Birmingham.

SED NEW BUILDINGS D OTHER WORKS.*

lists care is taken to ensure the
f the information given, but it may
y happen that, owing to building
ing the responsibility of commencing
e plans are finally approved by the
orities, "proposed" works, at the
ublication, have been actually com-
Abbreviations:—T.C. for Town
U.D.C. for Urban District Council;
r Rural District Council; E.C. for
Committee; L.G.B. for Local
nt Board; B.G. for Board of
; L.C.C. for London County Council;
orough Council; and P.C. for Parish

.—Application has been made to the
essrs. William Murray & Son, George-
sanction to the enlargement of the
n George-street in which the company
he business of hide factors.

a.—The *Boletin Oficial* (Buenos
March 3 publishes a Decree approving
wn up by the "Sociedad de Bene-
la Capital" (Buenos Aires) for the
n of a new building for a children's
, an estimated cost of 373,592 pesos
about £32,700).

The East Riding E.C. recommends
ations be entered into for the pur-
suitable site for a new school at
d that the architect and surveyor be
to prepare plans for the additional
tion required.

-A L.G.B. inquiry has been held
the application of the Corporation

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our list of Competitions, Contracts, etc.,

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6¼	6½	6½
Bath	8½	8½	8½	8	7¼	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	10½	8½	8½	8½
Bishop Auckland	9	9	9	9½	10	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10	9	9½	10	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	11	11	10½	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	9½	9½	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8½	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10½	10½	10	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5½	5½	5½
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10½	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	6½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10½	10¾	10½	10½	10	11	8½	8	8	8½
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8¼	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10½	10½	10	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	10½	10	8½	8½	9
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½*
Portsmouth	9½	9½	9½	9½	9½	8½	7½	7	7	7
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7½
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10	10	9½	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9½	9½	9½	9½	8	9½	8½	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10	9¾	9¾	9½	9½	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10½	9½	10	10	9	7½	7½	7½
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9½	6½	7	7½
Stockton-on-Tees	10	10½	10½	10½	10	10½	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	11	10	9½	9½	7½	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	10	9½	9½	9½	8½	10	8½	7½	7½	7½
Warrington	8½	10½	10½	10½	8½	10½	9½	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10½	11	10	10	9½	10½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	7½	6½	6½	6½
York	9½	9½	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted.

for permission to borrow £1,977 excess expenditure in connection with the extensions of the public baths.

Blackpool.—The following plans have been approved by the Blackpool Building Plans Committee:—Mr. H. C. Turley, one house, Dagger's Hall-lane; Messrs. F. & C. Smith, additions and alterations, Coronation-street; Mr. F. Hardisty, cart shed, Devonshire-road; Mr. M. Bramhall, additions, Ripon-road; Mr. M. Burton, motor house and greenhouse, Park-avenue; Blackpool Laundry Company, petrol stores, New-road.

Bo'ness.—At a recent meeting of Bo'ness T.C. a letter was read from the Secretary for Scotland, in which he stated that he was prepared to sanction the borrowing of an additional £12,000 for the extension of Bo'ness Electricity Works.

Bristol.—The Bristol Health Committee has approved of a scheme for the erection of nineteen houses near Avonmouth Docks for the use of employees engaged in dredging work.

Cairo.—A recent meeting in the Residency discussed the question of the erection of an Anglican Cathedral at Cairo.

Coatbridge.—Coatbridge Dean of Guild Court has granted plans for the extension of Speedwell Ironworks, at an estimated cost of £3,000.

Dewsbury.—A meeting of the members of the local Textile Workers' Union was held at Dewsbury recently to consider the desirability of purchasing a new Trades Hall, at a cost of about £2,000. It was decided to purchase a four-story warehouse in Union-street, with a view to the remodelling of the premises as union offices and club-rooms.

Eastry.—The R.D.C. has approved a plan submitted by Messrs. G. H. Denne & Son for a temporary dormitory at Sholden Lodge temporary war hospital.

Exeter.—The Sanitary Committee of the City Council reports the completion of the purchase for £500 of a site of about 3 acres, between Alphington and Ide, for a smallpox hospital.

Glasgow.—Linings granted at Glasgow Dean of Guild Court:—Messrs. G. & J. Weir, Ltd. engineers, to erect buildings at the junction of Newlands-road and Franklin-road, Cathcart; the New Savoy Theatre, Glasgow, Ltd., 79, West Regent-street, to make alterations in Hope-street and Renfrew-street; and Archbishop Maguire and other trustees of the Roman Catholic Archdiocese of Glasgow, to erect a school in Muslin-street, Bridgeton.

Golborne.—The Catholics of Golborne have been contemplating building a new church, to take the place of the one in Church-street. Land has been secured in High-street, near the Parkside Mills, and funds are being raised in aid of the proposed church.

Hammersmith.—The B.G. has granted a site in the grounds of the workhouse and infirmary for a building for Church of England services, provided that the building erected thereon shall be of a permanent character and no cost should fall upon the ratepayers of Hammersmith, and that the building be subject to the approval of the Board.

India.—The Government of India has sanctioned a University for Mysore.

Kirkheaton.—At a recent vestry meeting held in connection with the Parish Church it was reported that a substantial sum has been set aside for the provision of a new heating apparatus.

Langport.—The Langport Town Trust has referred to the Building Committee the question of renovation and redecoration of the Town Hall.

London.—The Metropolitan Drinking Fountain and Cattle Trough Association is to erect thirty troughs and twenty fountains in London during this year. Plans have been sanctioned for alterations proposed to be carried out at the Morning Star beerhouse, 231, Rye-lane, Camberwell, Mr. A. C. Bampton, licensee; and the beer, spirits, and wine off-licensed premises, 691, Old Kent-road, Camberwell, licensee, Mr. C. H. Gray.

Manchester.—At a recent meeting of the City Council it was stated that it was intended to spend £290 in altering the ruin on the old infirmary site for a library extension.

Merriden.—Plans passed by the R.D.C.:—New billiard-room and kitchen for Mr. W. W. George, Marston Green, Bickenhill; alternative drainage system for two new houses, Coleshill-road, Marston Green, Coleshill, for Mr. T. F. Gibbs; two shops and a house near the Bell Inn, Tile Hill, Berkswell, for Mr. J. G. Tommy, of Burton Green, Kenilworth; new chapel at St. Gerard's Hospital, Coleshill, for the Rev. G. V. Hudson, of Coventry-road, Coleshill; additions to children's camp at Corley Moor, in Mr. Browett's field, for the Coventry Children's Care Committee (Mr. A. E. Robinson, Education Office, 44 Bailey-lane, Coventry).

Middlesbrough.—The Plans Committee of the Corporation has passed plans for four new houses in Beckon-hill-road and Tavistock-street, also alterations to office premises in Albert-road.

Motherwell.—Motherwell Dean of Guild Court has passed plans presented by Mr. Hugh N. Bryden for the erection of a picture house near the Cross in Brandon-street, to give accommodation for 834 persons.

Perth.—The T.C. has had under consideration several schemes with a view to the improvement of the city water supply. The Special Water Committee has decided to accept an estimate for the sinking of an experimental artesian well at a cost of between £800 and £1,000.

Plomesgate.—At a recent meeting of the R.D.C. the Public Health Committee reported that repairs are needed to some cottages at Butley and Rendlesham.

Portobello.—Edinburgh Dean of Guild Court has granted warrant to Edinburgh Corporation for the erection of the first section of the new electric light station at Westbank, Portobello.

Ripon.—Subject to the approval of the L.G.B., the Ripon City Council have accepted tenders amounting to £9,242 for the proposed improvements of the Corporation gasworks.

Rochford.—The L.G.B. has held an inquiry in connection with the application by the R.D.C. for the sanction to borrow a further sum of £3,500 for works of sewerage and sewage disposal for the parish of Rochford.

Southowram.—The D.C. has approved plans for alterations to stable, etc., for Messrs. R. Whitaker & Sons, Ltd., at the Cock and Bottle Inn.

South Shields.—Plans for the new infectious diseases hospital at Cleadon have been prepared by the Borough Engineer.

Standish.—At the annual vestry meeting of the parishioners of Standish plans for a proposed new chancel screen, prepared by Messrs. Austin & Paley, church architects, of Lancaster, were submitted.

Stokesley.—A plan of a house proposed to be built at Hutton Rudby by Messrs. J. T. Tarran & Son has been approved by the R.D.C.

Warrington.—Town-planning preparations are to be taken in hand by the R.D.C., in readiness for definite action after the war. The L.G.B. has informed the Electricity and Tramways Committee with regard to its application for sanction to the borrowing of £9,536 for extra boiler accommodation at the electricity works, that it will be prepared to sanction the loan required for that purpose, and that in order to save time the work may be put in hand. The engineer has been authorised to advertise for plant, etc., and also to engage Mr. Percy Silcock to prepare the necessary plans.

West Ham.—Plans for alterations at the Essex Arms, Victoria Dock-road (licensee, Mr. H. C. Rhodes), have been approved.

Wick.—At a recent meeting of Wick Harbour Trust it was intimated that the new harbour improvements would be commenced about the middle of June, the advance of £30,000 having been passed by the Treasury.

GENERAL BUILDING NEWS.

NEW BATHS, TORQUAY.

The new medical and swimming baths erected on Beacon-hill, Torquay, at a cost of £15,000, were opened recently. The medical baths are in the Bath Saloons, a portion of which building has been reconstructed for their installation, and the large swimming bath is on an adjacent underground site. There are fifteen baths altogether, including seaweed, deep, vapour, needle, douche, electric, and reclining baths, and attached to each bath there are two or more dressing-rooms. There is an outdoor promenade which can be quickly reached from the cooling chamber. The swimming bath, 100 ft. long and 30 ft. wide, is constructed at the east end of the large saloon, and has been built with its roof on a level with the roadway. The depth of the bath is graduated from 4 ft. in the shallowest part to 7 ft. at the diving-stage end. Arranged round the sides are forty-seven dressing-boxes, with two shower-baths, one at each angle, and a staircase on either side leads to a commodious gallery for audiences on special occasions. The construction of the new baths has been carried out from the designs of Mr. Alfred J. Taylor, M.S.A., architect, Bath.

TUBERCULOSIS HOSPITAL, CARNARV

The new Tuberculosis Hospital a Seiont, Carnarvon, erected by the National Memorial Association, was opened by Mrs. Lloyd George. The formerly a private residence, provide modation for twenty-four patients. with patients' and staff dining-roo kitchens, nurses' and servants' qua hot-water boiler and disinfecting a are provided in an annex, and the out have been converted into a washhouse, drying-room, electric power-house, n etc. The establishment is lighted by light by plant provided by Messrs. Lance & Co., of Llandudno. The wards, to the north-east of the hospital accommodation for fifteen patients, with the necessary duty-rooms, bath rooms. In front of the detached a verandah. The detached wards Messrs. Humphreys & Co.'s patent con The painting contract was sub-let to Thomas, Carnarvon. The architect Jos. Owen, F.R.I.B.A., of Menai Bridg

TRADE NEWS.

Boyle's latest patent "air-pump" v have been applied at the Gas Light Company's Works, Beckton, North

Messrs. Mitchell's fishing premise Yarmouth, are being supplied with S special exhaust ventilators by Messr Shorland & Brother, Ltd., of F Manchester.

We understand that the wate material ironite (Ironite Company, Victoria-street, Westminster, S.W.), ha of much value in the construction of purifiers. Cast-iron boxes built on th work out at a cost of about 2s. a c while reinforced concrete boxes built u or above the surface and rendered wi inside can be constructed for as 1s. 7d. a cube foot for large box purifier boxes constructed of concre ironite can also be used with advant since the greater the number of p greater the possibility of leakage, cogent reasons for advocating the use concrete construction. Some large were built at Romford with concret each 30 ft. by 20 ft. by 5 ft. 6 in dimensions, and the inner surfaces we with ironite, which was mixed with pan in small quantities, kept constant and applied to the face of the conc a stiff brush, stippling it well into th the concrete. Two coats were us secured a sound job, and the mat adopted after full consideration in to cement rendering. The materi worth the consideration of those wh erect tanks which are waterproof and

[Photo.: Bedford Lemere

New Offices, Glasgow. (*See page* 359.)

/ OFFICES, GLASGOW.

uilding has been designed to accommo- indoor staff of Messrs. Alex. Stephen & d.—the Clydeside shipbuilding and ng firm—and consists of a three- uilding. 159 ft. 6 in. by 50 ft. 10 in.

inforced concrete superstructure com- o internal and two external lines of with square bases, main girders, beams, staircase, floor and roof slabs. inuous marginal lintels at the first roof levels serve to form a string-course enriched cornice respectively. The xternal columns are the same section rom street level upwards to the roof, are suitably checked to receive the er brick walls.

mpleted structure is an example of er in which reinforced concrete work ed architecturally. No rendering coat ind was applied to the internal or xposed surfaces after the shuttering k. and it was found necessary to treat gs with three coats of "Duresco" ce-board marks being nowhere e.

asters, string-course, and the cornice emarkably free from surface fractures, main entrance is in stone from a local The retaining walls are in brickwork ed by a concrete plinth course. The side elevations are faced with the n Brick and Tile Company's "Nori"

indow-frames, giving the maximum f daylight, have been employed in nical departments, and elsewhere " windows have been fitted. The s supplied with a passenger lift, a self- system of steam-heating generated e ground floor, and an extensive nt of electric light, bell, and telephone

erior decorative work is of a good and l character, consistent with the or which the building is intended. work throughout is in mahogany and walls and ceilings of the private d rooms are relieved with panelled rk. The various floor surfaces are vith heavy cork linoleum, terrazzo, netry, and the main roof is covered alt ¾ in. thick. The panelling in the ffice and board-room was removed ld house designed by Robert Adam, dapted and refixed.

ucture thus briefly described forms part of an extensive alteration in the lay-out of the shipbuilding yard, which includes an entirely new range of buildings, viz.:—Painter, plumber, caulker, carpenter, and rivet stores, a large weighbridge, commissionaire's box, time office, and covered-in workmen's entrances; also a new boundary wall to street frontage, with a mechanically-operated main entrance gate.

[*Photo.: Bedford Lemere & Co.*

New Offices, Glasgow.

The plans and elevations were prepared by Mr. F. G. Orr, architect to the proprietors, who placed the design of the reinforced concrete work in the hands of the Considère Construction Company, Ltd. Messrs. Melville Dundas & Whitson, Glasgow, were the contractors responsible for the erection of these buildings, and the whole work was carried out by them with the following exceptions:—

Messrs. Alex. Stephen & Sons, Ltd.—Plumber-work, paintwork, hard-wood joinery, electric lighting, and wiring generally.

Messrs. Waygood Otis, Ltd.—Passenger lift.

Messrs Ashwell & Nesbit, Ltd—Heating.

Messrs. John Youden & Son, Ltd., Glasgow—Tile and terrazzo work.

[*Photo.: Bedford Lemere & Co.*

New Offices, Glasgow.

NEW COMPANIES.

The undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

Waterloo-place (West Side) Estates, Ltd. (143,562). Registered April 10. To purchase, etc., lands, buildings in Great Britain and elsewhere and develop, prepare for building and turn same to account, to enter into contracts with builders and contractors, to construct tramways, railroads, docks, piers, etc., and carry on business of builders, contractors, dealers in sand, stone, lime, cement, timber, hardware, and other builders' requisites, tile and terra-cotta makers, colliery proprietors, etc. Nominal capital, £2,000 in 2,000 £1 shares.

Chapman Brothers (Chelsea), Ltd. (143,628), 241, King's-road, Chelsea, S.W. Registered April 17. To carry on business of makers, repairers, and dealers in plaster casts, pictures, paintings, sculptures, bronzes, works of art, furniture, antiques, glass and glass ware, builders, contractors, brick, tile, and terra-cotta makers, electricians, sanitary engineers, carriers, etc. Nominal capital, £4,000 in 4,000 £1 shares.

Albaverre, Ltd. (143,654). Registered April 19. To carry on business of glass bottle and stopper manufacturers, bevellers, silverers, plate-glass importers, etc., engineers, founders, tool makers, iron and steel convertors, painters, builders, carriers, manufacturers of bricks, fireclay, etc. Nominal capital, £50,000 in 48,250 £1 Preferred Ordinary shares, 235,000 1s. deferred shares.

Barrons (Leicester) Ltd. (143,660), Rowton-buildings, 11, Bowling Green-street, Leicester. Registered April 19. To carry on business of iron founders, mechanical, mining, gas, sanitary and water engineers, makers of agricultural implements and other machinery and tools, motor engine and body builders, painters, builders, carriers, wood-workers, etc. Nominal capital, £20,000 in 5,000 £1 Preference shares and 15,000 £1 Ordinary shares.

William Hinge, Ltd. (143,736). Registered April 29. To acquire and carry on business of coopers, carpenters, builders, iron-founders, and manufacturers of all articles of furniture, etc., made from wood. Nominal capital, £4,000 in 4,000 £1 shares.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) ar advertised in this number**: Competitions, —; Contracts, iv; Public Appointment, xiv; Auction Sales, xvi. Certai conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bin themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be ma for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willin to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while eve endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

May 12.—**Lanark.**—Painting, etc.—The District Committee of the Middle Ward of the County of Lanark invites tenders for the painter, etc., work of the various blocks at Hairmyres Colony, East Kilbride. Names to Messrs. Sydney Mitchell & Wilson, architects, 13, Young-street, Edinburgh.

May 12.—**Rathcormac (Co. Cork).**—Residence.—For building new residence, including entrance walls, gates, avenue, iron fencing, water supply, and sewage works, near Rathcormac, Co. Cork, for Mrs. Butch. Plans, etc., by Mr. Wm. F. Maye, C.E., architect, Fermoy.

May 13.—**Bristol.**—Painting, etc.—For (*a*) stuccoing and painting external walls of Bradley Villa, Manor-road, Fishponds; (*b*) painting, etc., hospital wards 4, 5, 8, and 9 at Eastville Institution; (*c*) plastering, painting, etc., wards 187 and 188 at Eastville Institution; (*d*) plastering, painting, etc., rooms 152a and 153 and ward 152 at Eastville Institution. Forms of tender of Mr. J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol.

May 13.—**Glasgow.**—Jobbing Works, etc.—The Corporation invites offers for jobbing and other works for one year. Specification, etc., at the Office of Public Works, City Chambers, 64, Cochrane-street.

May 15. — **Bognor.** — Alterations. — Messrs. Timothy White Company, Ltd., invite tenders for alterations to their premises in High-street, Bognor. Plans, etc., of the architect, at 1, The Arcade, Bognor.

May 17.—**King's Langley and London.**—Painting.—The Metropolitan Asylums Board invites separate tenders for painting and repairing works at the following institutions:—(1) Leavesden Asylum, near King's Langley, Herts; (2) North-Western Fever Hospital, Lawn-road, Hampstead, N.W. Specifications by Mr. W. T. Hatch, M.Inst.C.E., M.Inst.M.E., Engineer-in-Chief, may be inspected at the office of the Board, Embankment, E.C., and can be obtained upon payment of a deposit of £1 in respect of each work.

May 17.—**Lumphanan.**—Alterations, etc.—For mason, carpenter, slater, and plaster works of alterations and additions to dwelling-house at Collieston, Lumphanan (Mr. Alexander Ferries, tenant). Offers will be receievd by Messrs. Cochran & Macpherson, Advocates, 152, Union-street, Aberdeen.

May 20.—**Windsor.**—Fencing.—For the erection of about 150 yds. of oak pale fencing, for the Guardians. Specification may be seen at the Poor Law Institution, Old Windsor.

May 24.—**Manchester.**—Ambulance Accommodation.—For additional ambulance accommodation at Goulden-street, for the Watch Committee. Plans, etc., at the office of the City Architect, Town Hall.

May 24.—**Uxbridge.**—Painting, etc.—The Uxbridge Joint Hospital Board invite tenders for exterior and interior painting and repairs at their hospital, Kingston-lane, Hillingdon, near Uxbridge. Specification from the Board's Surveyor, Mr. William L. Eves, 54, High-street, Uxbridge.

May 30.—**Kilmarnock.**—Painting.—The Gas Committee of the Kilmarnock Corporation invites tenders for the painting of the gasholders, etc., at Riverbank and Langlands-street. Schedules on application to the Gas Offices at Riverbank Gas Works. Deposit, £1.

No Date.—**Dewsbury.**—Painting.—For painting the outside of Cut End Mills, Savile Town. The Thornhill Manure Company, Cut End Mills, Dewsbury.

No Date.—**Pengam.**—School Chapel.—For the erection of a school chapel at Pengam. Plans and specification may be seen at the Surveyor's office, Pengam Garden City, and bills of quantities obtained at 3, Dumfries-place, Cardiff.

No Date.—**Tunstall.**—Alterations, etc.—For alterations and additions to the Sportsman's Arms, Tunstall, near Catterick. Names to Mr. George W. Atkinson, architect, 1, Mark-lane, Leeds

FURNITURE, MATERIALS, etc.

May 12.—**Arbroath.**—Materials.—Supply to the B.C. of builders' materials for the year June 1, 1916, to May 31, 1917. Schedules of quantities of the Subscriber, Mr. W. K. Macdonald, Town Clerk, Arbroath.

May 13.—**Glasgow.**—Materials.—Supply to the Corporation of builders' materials for one year. Specifications, etc., at the Office of Public Works, City Chambers, 64, Cochrane-street.

May 13.—**Kingston-on-Thames.**—Materials.—Supply to the Corporation, for the year ending June 30, 1917, of builders' materials. Forms of tender of Mr. Harold A. Winser, Town Clerk, Municipal Offices, Kingston-upon-Thames.

May 16. — **Bradford.**—Materials.—Supply to the Cleansing and Team Labour Committee of the Corporation of builders' materials during the year ending June 30, 1917. Forms of tender, etc., of Superintendent Call at the Hammerton-street Depôt.

ENGINEERING, IRON, AND STEEL.

May 12.—**Lanark.**—Ironmongery.—The District Committee of the Middle Ward of the County of Lanark invite tenders for the ironmongery required for the various buildings at Hairmyres Colony, East Kilbride. Messrs. Sydney Mitchell & Wilson, architects, 13, Young-street, Edinburgh.

May 17.—**Enfield.**—Boilers, etc.—The U.D.C. invites tenders for the purchase of two old Cornish boilers, two engines and two pumps, a quantity of old iron. Further information can be obtained from Mr. R. Collins, the Council's Surveyor, Public Offices, Enfield, Middlesex.

ROAD, SANITARY, AND WATER WORKS.

May 13.—**Brentford.**—Granite.—Supply to the U.D.C. of granite and granite chippings. Forms of tender, etc., of Mr. J. W. Croxford, Surveyor, Clifden House, Boston-road, Brentford.

May 13.—**Oswestry.**—Granite, etc.—Supply to the R.D.C. of broken granite, broken and unbroken limestone, for the repair of roads. Mr. Charles H. Bull, Clerk to the Council, Oswestry.

May 15.—**Runcorn.**—Materials.—Sup the R.D.C. of granite macadam, setts stones, and sanitary pipes up to March Tender forms of Mr. W. E. Hough, Actin to the Council, Council Offices, 71, High Runcorn.

May 15.—**Tilbury.**—Materials.—Supply U.D.C. of materials for road repairs. F tender of Mr. S. A. Hill-Willis, Engin Surveyor to the Council, Tilbury.

May 17.—**Llwynypia.**—Sewer.—The gan Coal Company, Ltd., invite tend laying about 110 yds. of 9-in. cast-ir sewer and about 490 yds. of 9-in. stonew sewer at Llwynypia. Plans, etc., may at the General Offices of the Company, pia, Rhondda. Deposit, £1 1s.

May 17.—**North Walsham.**—Granite, Supply to the U.D.C. of broken gran broken flints and for road rolling. F tender of Mr. J. W. Stevens, Surveyor Council, North Walsham.

May 22.—**Newport (Mon.).**—Materials Supply to the Monmouthshire C.C. of n or for hauling broken and unbroken s the repair of main roads for the year March 31, 1917. Particulars of Mr. Tanner, County Surveyor, County Offices, Newport, Mon.

✱ May 23. — **Willesden.**—Asphalt P The Willesden D.C. invite tenders for p and laying about 16,190 yds. super. of rock asphalt.

May 24.—**Middlewich.**—Materials, e supplying to the U.D.C. of road materi also for paving, steam rolling, team lab nightsoil removal, for the year ending, 1917. Tender forms from the Council's or Sanitary Inspector, Town Hall, Midd

May 29.—**Shoreham-by-Sea.**—Flints. to the U.D.C. of 350 yds. of hand-p surface-dug flints. Forms of tender Surveyor, Town Hall, Shoreham-by-Sea.

June 5.—**Winsford.**—Stone.—Supply U.D.C. of stone for roads during th ending March 31, 1917. Forms of ten Mr. James Wilkinson, Surveyor, Winsfo

No Date.—**Glen Lomond.**—Roads, the forming of roads and footpaths an disposal works at Glen Lomond Sanato Milnathort, Kinross-shire, for the Fife ross Joint Sanatorium Board. Speci etc., from Messrs. Charles Mitchell & C.E., 23, Hill-street, Edinburgh. Depos

No Date. — **Thingoe.** — Haulage. haulage of granite, etc., for the R.D.C of tender of Mr. A. R. Cameron, Board Room, Bury St. Edmund's.

Auction Sales.

✱ May 23. — **Rotherhithe.** — Messrs Smith, Oakey, & Garrard will sell by a the Mart, freehold warehouse, factory etc.

✱ June 6. — **Chelmsford.** — Messrs. Horsey, Sons, & Cassell will sell by a the premises, a corrugated-steel buildi

✱ June 6.—**Whitechapel-road.**—Mes ton, Cooper, & Co. will sell by auctio Mart, freehold and leasehold estate.

[Those with an asterisk (*) are advertised in this issue.]

ES CURRENT OF MATERIALS.

to the exceptional circumstances which at the present time, prices of materials e confirmed by inquiry.]

our last issue metals have advanced.—Ed.

aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest t. Quality and quantity obviously affect prices which should be remembered by those who e of this information.

BRICKS, &c.

000 Alongside, in River Thames.	£ s. d.
cks	2 0 0
tocks for Facings	2 12 0

1,000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
……	1 10 0	Best Blue Pressed Staffordshire	5 0 0
reham ……	3 12 0	Do. Bullnose	5 5 0
Pressed n Facing	5 5 0	Best Stourbridge Fire Bricks	4 15 0
Bricks— White, and Glazed		D'ble Str'tch'rs	18 17 6
		Double Headers	15 17 6
ners	13 7 6	One Side and two Ends	19 17 6
……	12 17 6	Two Sides and one End	20 17 6
Bullnose 4½ in. ……	16 17 6	Splays and Squints	18 7 6

cond Quality £1 per 1,000 less than best.

	s. d.	
Ballast	8 3	per yard, delivered.
and Pit Sand	8 6	,, ,, ,,
shed Sand	9 6	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
tland Cement	2 5 0	..	2 8 0

1s. alongside in 80-ton lots.

te 2s. 6d. per ton extra on above.

und Blue Lias Lime.... 1 5 6 at rly. depôt.

The cement or lime is exclusive of the ordinary charge for sacks.

ne Lime .... 18s. 0d. per yard delivered.

ige Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
tone — delivered in railway trucks at ourne Park, Paddington, G.W.R., or Lambeth, G.W.R., per ft. cube	1 7
delivered in railway trucks at Nine L. & S.W.R., per ft. cube	1 8¾
delivered on road waggons at Nine Elms	1 9¼

d Stone—

	s. d.
Whitbed, in random blocks of 20 ft. age, delivered in railway trucks at tbourne Park, G.W.R., South Lambeth, .R., or Nine Elms, or L. & S.W.R. per ft.	2 5½
. delivered on road waggons at Pimlico arf or Nine Elms Depôt, per ft. cube	2 6½

Basebed, 2d. per ft. cube extra.

Blocks—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
in blocks	2 0	Closeburn Red Freestone	2 2
locks	1 7½	Red and White Mansfield Random block	2 9
in blocks	2 4		
Dale in	2 5	Yellow Magnesian Limestone do. do.	3 3

tone—*Robin Hood Quality.*

Ft. Cube, Delivered at Railway Depôt.	s. d.
random blocks	3 4

er Ft. Super., Delivered at Railway Depôt.

	s. d.
wn two sides landings to sizes (under super.)	2 5
bed two sides ditto, ditto	2 8
n two sides slabs (random sizes)	1 0½
½ in. sawn one side slabs (random sizes)	0 8¼
2 in. ditto, ditto	0 6¾

ork—

er Ft. Cube, Delivered at Railway Depôt.	s. d.
random blocks	3 0

er Ft. Super, Delivered at Railway Depôt.

	s. d.
n two sides landing to sizes (under 40 ft.)	2 3
bed two sides ditto	2 7
n two sides slabs (random sizes)	1 0
-faced random flags	0 5

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
chine-made tiles or hand-made sand- tiles from either Broseley or rdshire district	2 12 6
ntal ditto	2 15 0
valley tiles (per dozen)	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

		£ s. d.
e Bangor slates,	20 by 10	11 16 0
ality ,,	,,	11 10 0
,,	16 by 8	5 15 0
e Portmadoc,	20 by 10	11 13 6
ality ,,	,,	11 3 6
,,	16 by 8	5 15 0

WOOD.

er prices should be confirmed, as the market is *changing daily.*

uilding Redwood.

mported sizes. Per standard.

	£ s. d.		£ s. d.
in. by 12 in., 4 in. 11 in., 3 in. by 11 in., . by 9 in., and 2 in. 11 in.	33 10 0	..	34 10 0

WOOD (*Continued*).

Best Building Redwood. Per standard.

	£ s. d.		£ s. d.
Deals: 3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32 10 0	..	33 10 0
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. 2 in., 2½ in., and 3 in. by 5 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	31 10 0	..	32 10 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0		more than battens.
¾ in.	1 0 0		more than battens.
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best.

Best Middling Dantzic and Memel Fir Timber Logs — Per load of 50 ft. cube.

	£ s. d.		
(average specification)	10 0 0	..	—
Seconds do. do.	9 10 0	..	—
9 in. to 10 in. do.	8 10 0	..	—
6 in. to 8 in. do.	8 0 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	12 0 0	..	13 10 0
Do. 6 in. to 10 in.	10 0 0	..	11 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
	Per standard.		
Best Pitch Pine Deals	34 0 0	..	35 0 0
Under 2 in. thick	0 10 0		extra.

Joiners' Wood.

White Sea Second Quality Red:

	£ s. d.		£ s. d.
4 in. by 11 in.	39 0 0	..	40 0 0
3 in. by 11 in. and 2 in, by 11 in.	38 0 0	..	39 0 0
4 in. by 9 in.	37 0 0	..	38 0 0
3 in. by 9 in. and 2½ in. by 9 in.	36 0 0	..	37 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	33 0 0	..	34 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Third quality	2 0 0		less than best.

Archangel White Deals—

	£ s. d.		£ s. d.
Best 3 in. by 9 in. and 10 in. and 11 in.	36 0 0	..	37 0 0
Seconds, do.	2 0 0		less than best.
U.S. Battens	30 0 0	..	32 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal— Per square actual.

	£ s. d.		£ s. d.
1¼ in. by 6½ in. planed and shot	1 16 0	..	1 19 0
1¼ in. by 6½ in. planed and matched	1 16 6	..	1 19 6
1 in. by 6½ in. planed and shot	1 9 0	..	1 12 0
1 in. by 6½ in. planed and matched	1 9 6	..	1 12 6
¾ in. by 6½ in. planed, matched and beaded, or V jointed	1 4 0	..	1 6 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
⅝ in. by 6½ in. do.	1 0 0	..	1 1 0

	Per standard.		
Columbian or Oregon Pine, best quality	42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		,,
Seconds, regular sizes	43 10 0		,,
Oddments	37 10 0		,,
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super., as inch	0 1 0	..	0 1 3
¾ in. do. no.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super., as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super., as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per super., as inch	0 1 0	..	0 1 3 upwards.
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary Sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

Turning extra.

METALS (*Continued*).

Per ton, in London.

Iron—	£ s. d.		£ s. d.
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0

Steel Bars, Ferro-Concrete quality, £18 basis price.

	£ s. d.		£ s. d.
Hoop Iron, basis price	20 0 0	..	20 10 0
,, ,, Galvanised	33 0 0	..	

(*And upwards, according to size and gauge.)

Sheet Iron Black—	£ s. d.		£ s. d.
Ordinary sizes to 20 g.	20 10 0	..	21 0 0
,, ,, 24 g.	21 10 0	..	22 0 0
,, ,, 26 g.	22 10 0	..	23 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes. 6 ft. by 2 ft. to 3 ft. to 20 g.	31 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	33 0 0	..	—
,, ,, 22 g. and 24 g.	33 10 0	..	—
Ordinary sizes to 26 g.	36 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g.	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g.	23 15 0	..	—
Best Soft Steel Sheets, 26 g.	25 10 0	..	—
Cut Nails, 3 in. to 6 in.	24 10 0	..	25 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
Lead—Sheet, English, 4 lb. and up		41 10 0	..	—
Pipe in coils		42 0 0	..	—
Soil pipe		45 0 0	..	—
Compo pipe		45 0 0	..	—

Note—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

Copper—				
Strong Sheet	per lb.	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
Copper nails	,,	0 1 6	..	—
Copper wire	,,	0 1 8	..	—
Brass—				
Strong Sheet	,,	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
Tin—English Ingots	,,	0 2 0	..	—
Solder—Plumbers'	,,	0 0 11	..	—
Tinmen's	,,	0 1 2	..	—
Blowpipe	,,	0 1 4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
,, fourths	4¾d.	32 oz. thirds	8¾d.
21 oz. thirds	6½d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
$\frac{3}{16}$ Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 5
,, ,, ,, in barrels	,,	0 3 6
,, ,, ,, in drums	,,	0 3 9
Boiled ,, ,, in barrels	,,	0 3 8
,, ,, ,, in drums	,,	0 4 0
Turpentine in barrels	,,	0 3 10
,, in drums	,,	0 4 1
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	60 0 0
Red Lead, Dry	per ton	58 0 0
Best Linseed Oil Putty	per cwt.	0 12 0
Stockholm Tar	per barrel	4 5 0
Genuine White Lead Paint— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins), not less than 5 cwt. lots	per ton delivered	75 0 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

DISS.—Accepted by the Urban District Council for the supply of granite :—
Groby Granite Company, 250 tons at 15s. 4d. per ton; Ellis & Everard, 250 tons at 15s. 11d. per ton.

DISS.—Accepted by the Urban District Council for the supply of stones, gravel, and silt :—
C. R. Ayton, Wymondham, for stones at 4s. 10d., gravel 4s. 4d., and silt at 3s. 10d. per ton.

NEWTOWNARDS (Ireland).—For carrying out sewerage scheme at Helen's Bay, for the Newtownards Rural District Council. Mr. W. K. Wheeler, C.E., Engineer :—

J. Ross & Sons	£1,499	17	6
W. J. Campbell & Sons	1,089	17	0
R. D. Pollock	1,060	0	0
J. Graham	815	0	0
W. Hirst & Son	774	0	0
Grainger Bros.	814	0	0
T. Paisley & Sons, Pound-street, Newtownards*	620	0	0

PETTIGO.—Erection of a hall for the Orange Lodge, Pettigo. Messrs. F. E. Townsend & Son, architects, Enniskillen :—

J. Bloomfield	£665	0
A. & G. Freebarn	665	0
J. McBride	640	0
J. McMahon (withdrawn)	437	15
S. Moore, Boyaghan, Irvinestown, Co. Fermanagh*	575	0

ROMSEY.—For building repairs and reconstruction, after fire, the Mottisfont Whiting, Putty, and Colour Works, for Mr. W. G. Prince. Mr. W. Comley Roles, building surveyor, Awbridge, near Romsey :—

F. W. Collins, Awbridge‡	£698

‡ Accepted subject to adjustments.

◆

PATENTS.

APPLICATIONS PUBLISHED.*

4,951 of 1915.—Moritz Kahn and Alan Wilfrid Ruddle : Floors, roofs, and similar portions of building structures.

5,111 of 1915.—Strachan & Henshaw, Ltd. and Tom Sargent : Discharge shoots for filling skips, buckets, and the like.

5,186 of 1915.—George Shaw : Means for actuating dock gates.

5,227 of 1915.—Frederick Thackeray : Curved travelling templet or shield with shaft, hinged at the centre points of movements for the construction of domes.

6,157 of 1915.—Andrew Edward McKean, William George Trethewey, and Claude Charles Plucknett : Fastenings for hinged or pivoted windows and the like.

6,333 of 1915.—Edward Johnson and William Boulton, Ltd. : Tile and like presses.

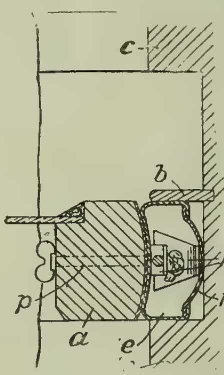
10,643 of 1915.—Joseph Brewin : Method of making salt-glazed stoneware pipes, gullies, traps, and the like, to prevent blisters rising after such are made.

13,851 of 1915.—Benjamin Moon Hodges and Henry Hodges : Ladders.

SELECTED PATENT.

21,546 of 1914.—Joshua Brittain and Herbert Charles King : Windows.

This relates to pivoted-sliding windows in which the sash *a* is pivoted to a metal box-like member *e* which slides between the beading *b* and the frame *c*. The contracting surfaces of the sash and member *e* are curved, and a convex plate *m* closes the box member *e* bears against the face of the pulley stile. member *e* is closed at the top by a cap wi passage to allow for the passage of the cord. The pivot is controlled by a sprin The sash is locked in its closed position screws *p*.



21,546 of 1914.

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

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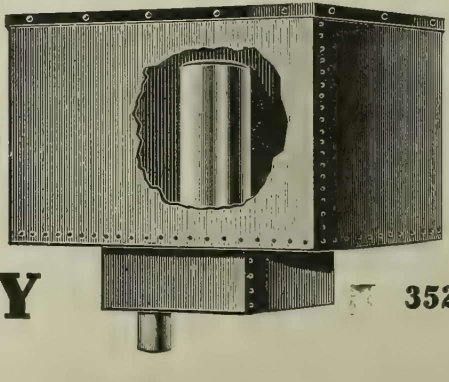

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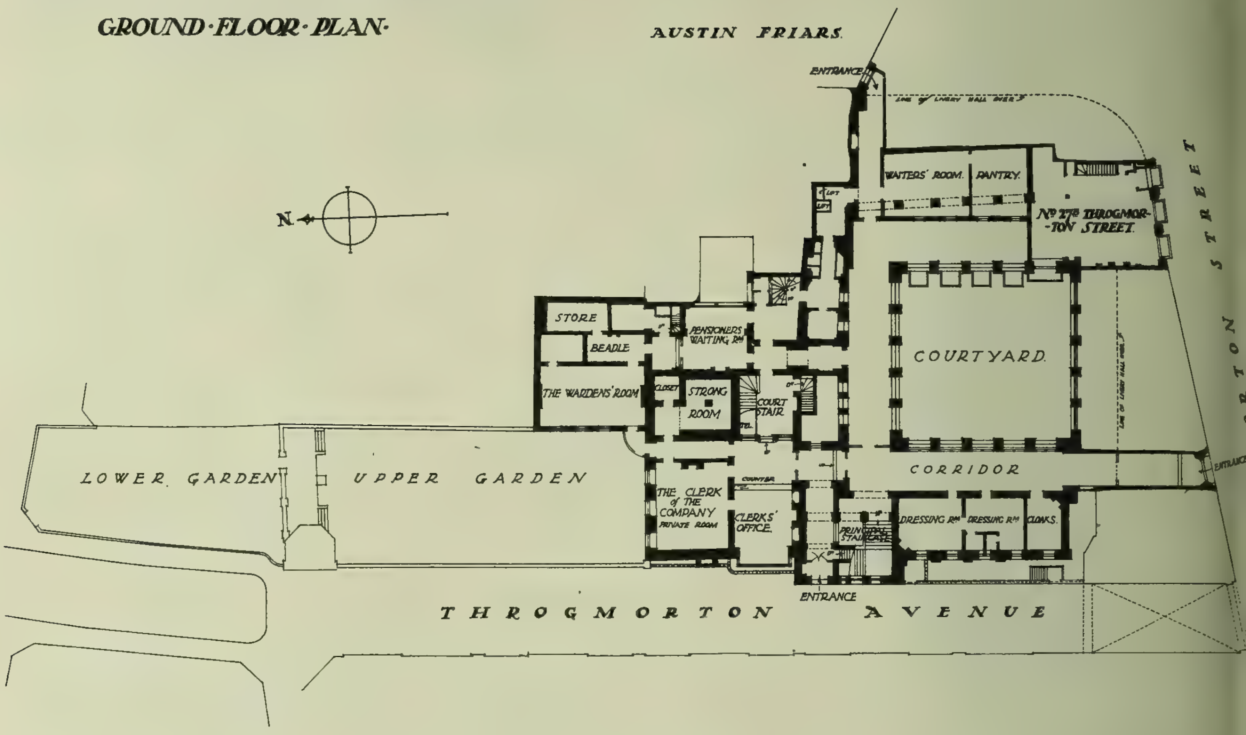

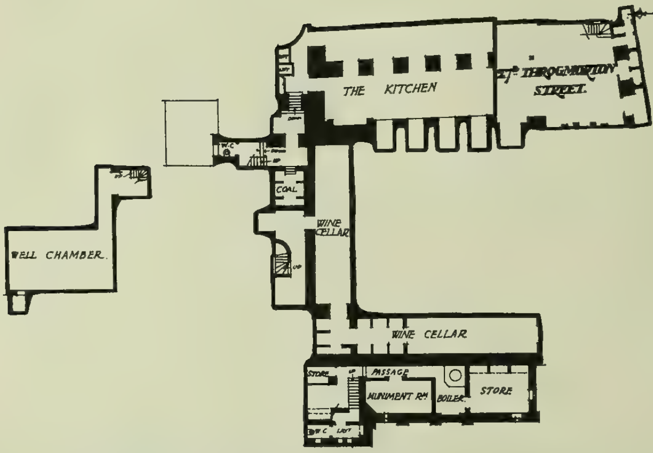

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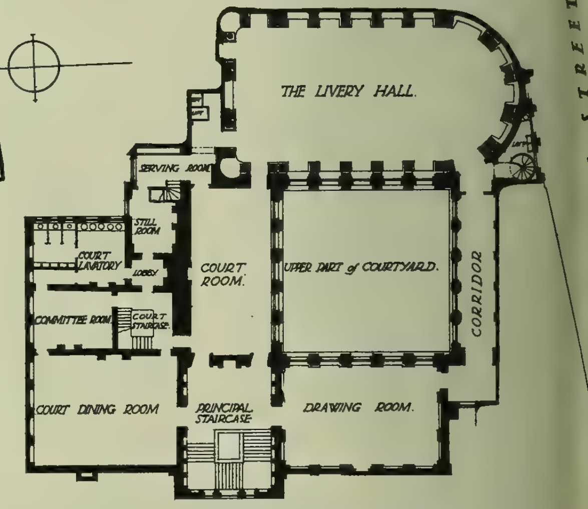

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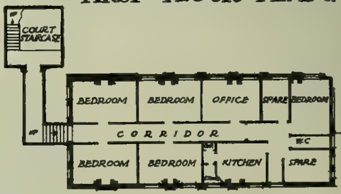

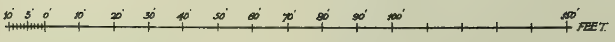

SECOND FLOOR PLAN.

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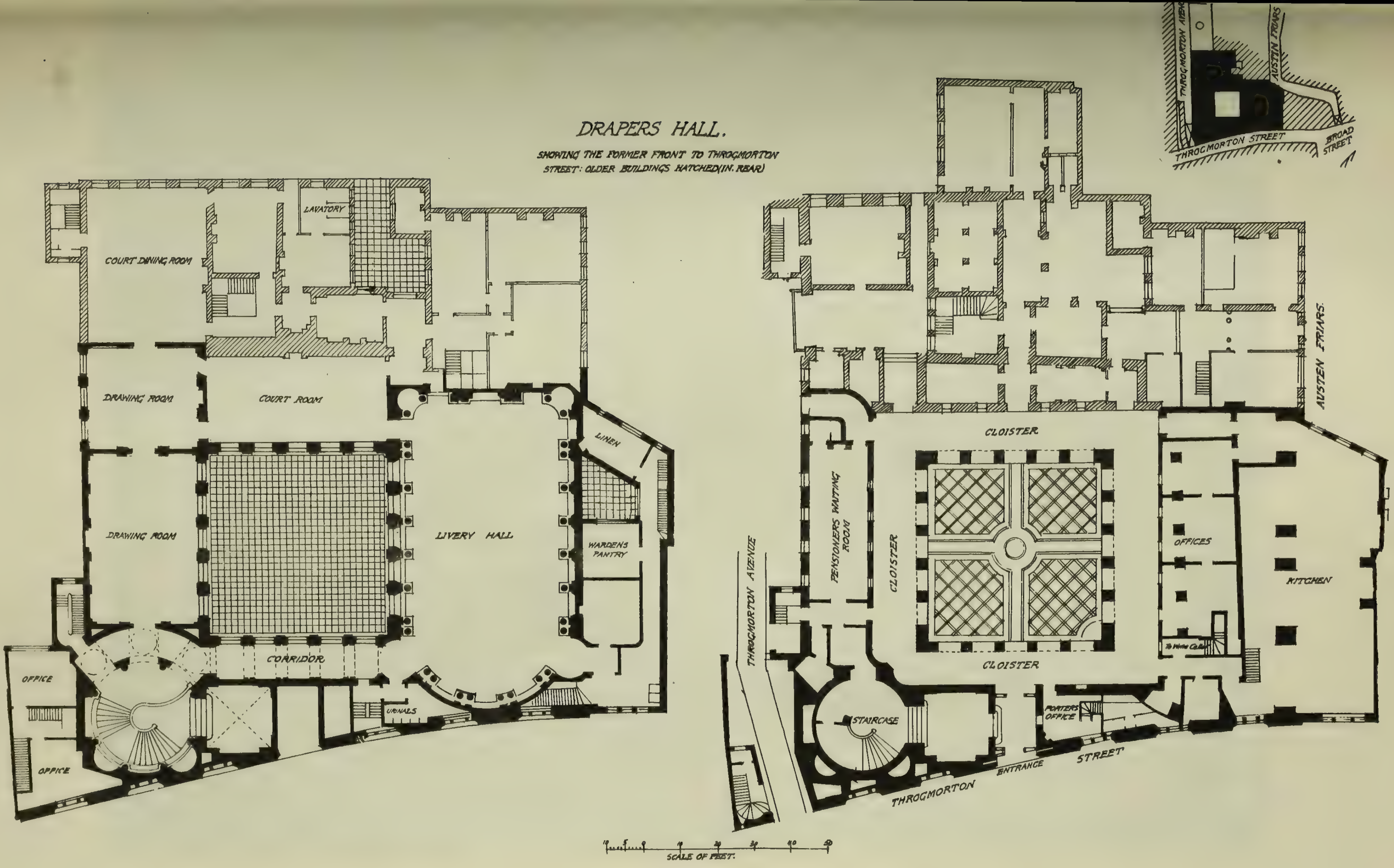

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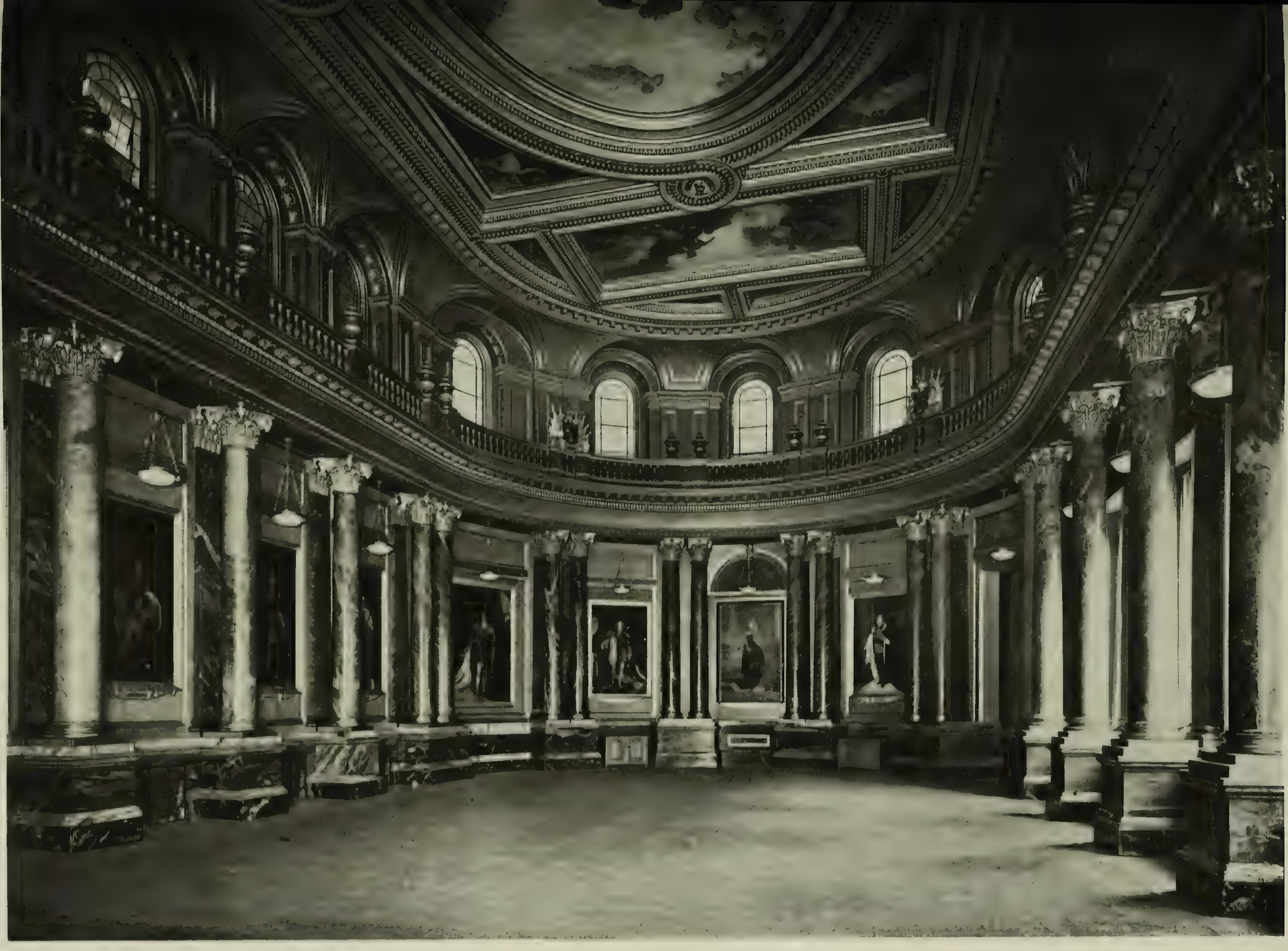

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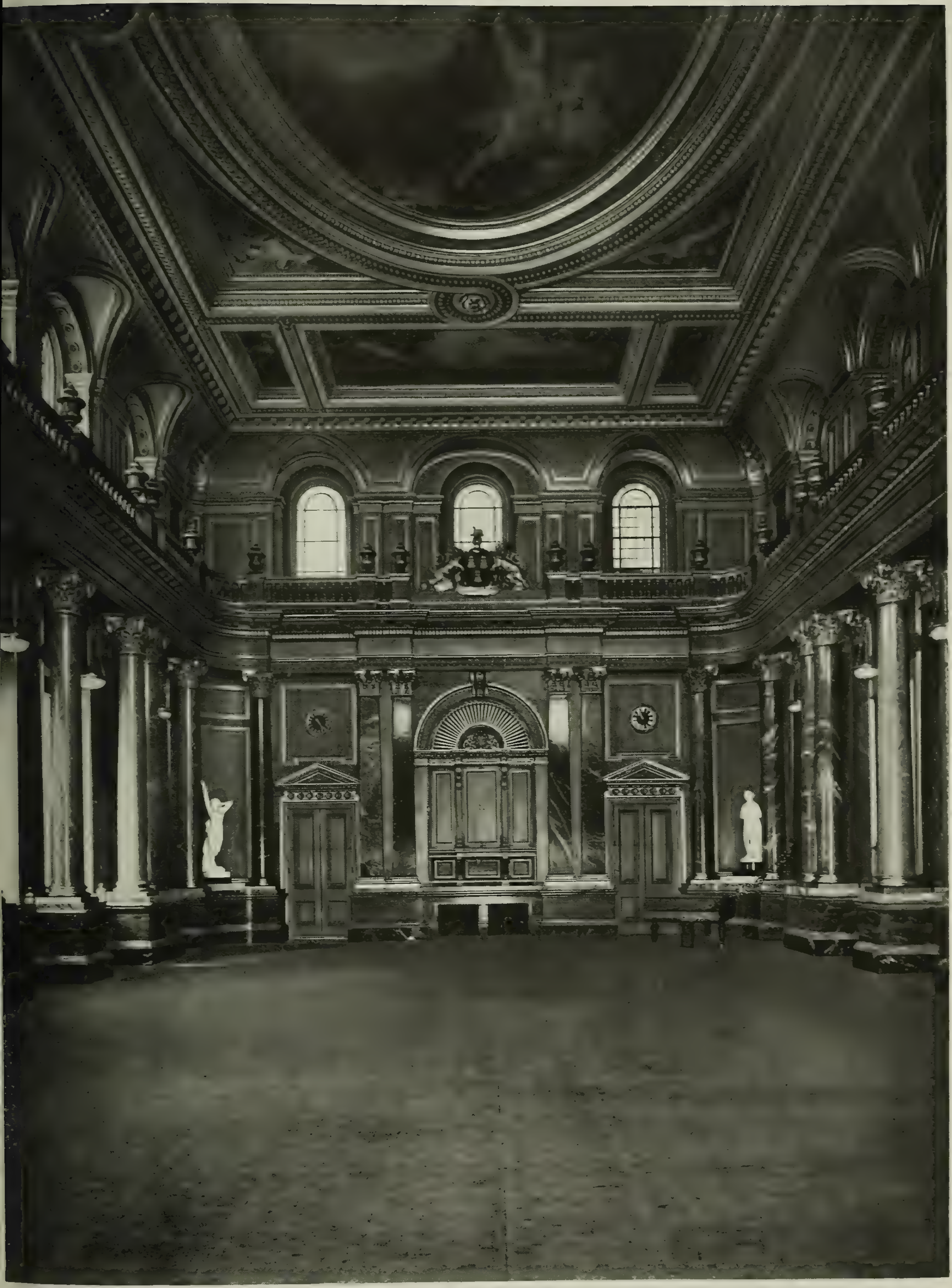

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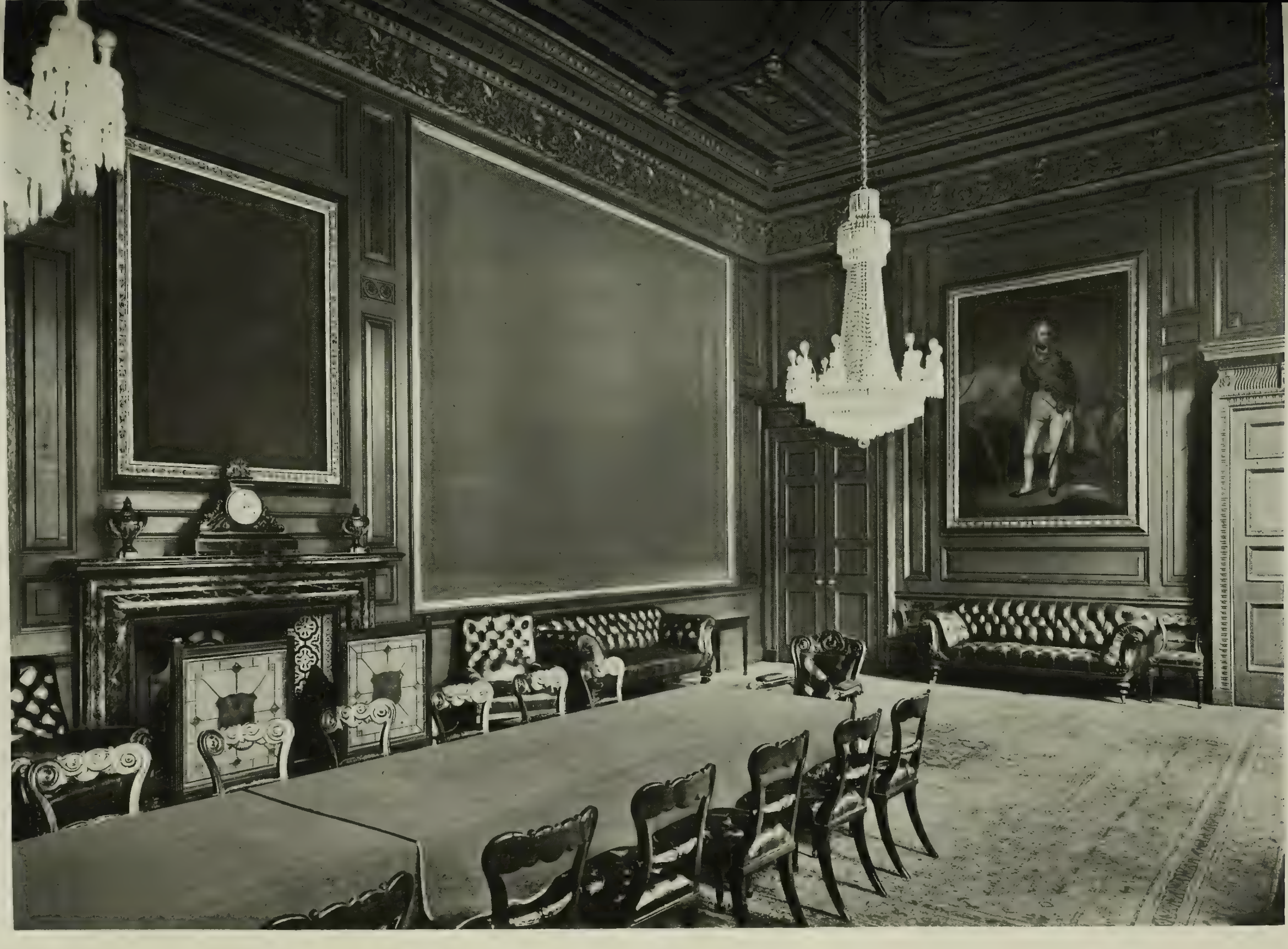

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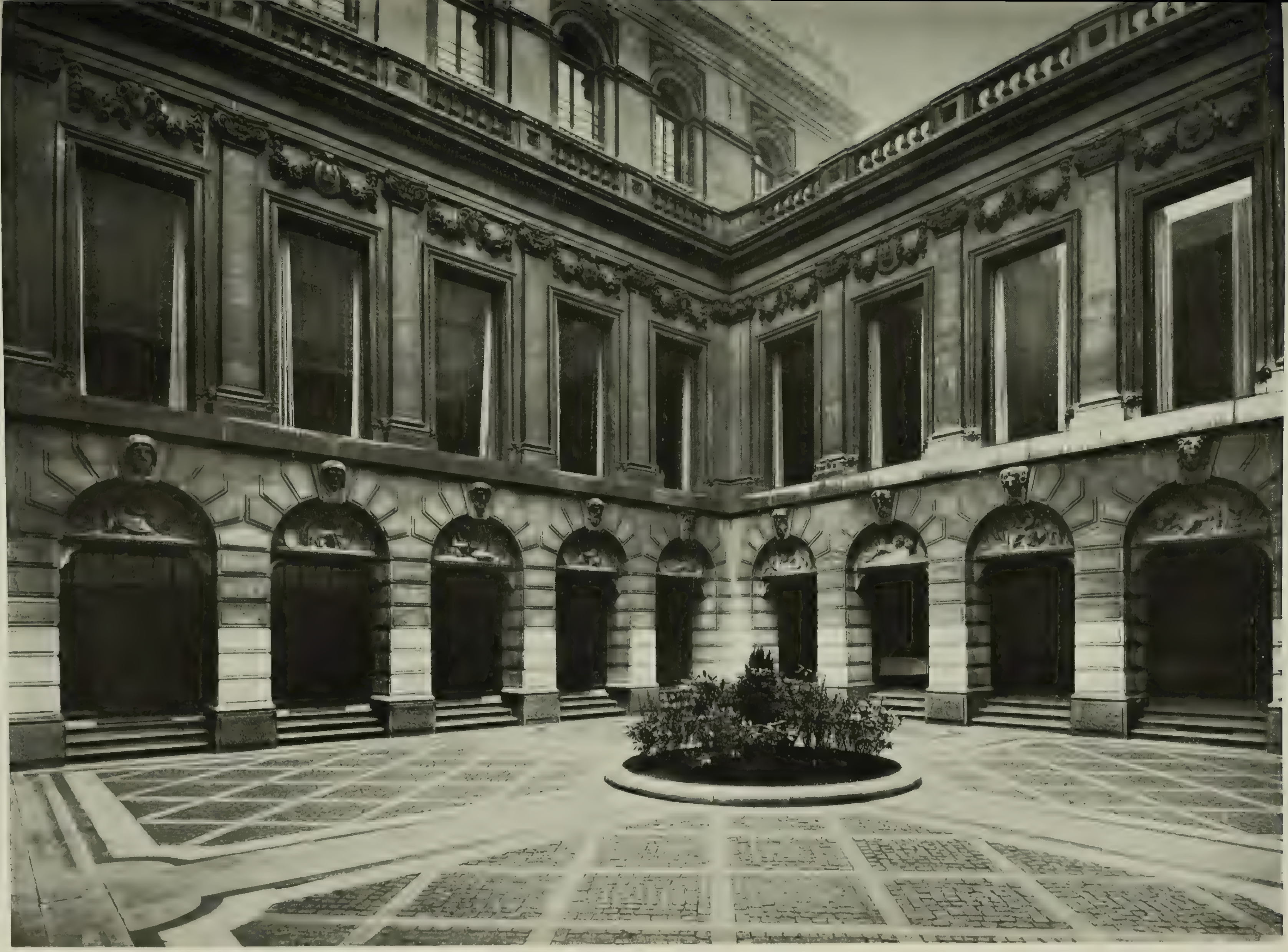

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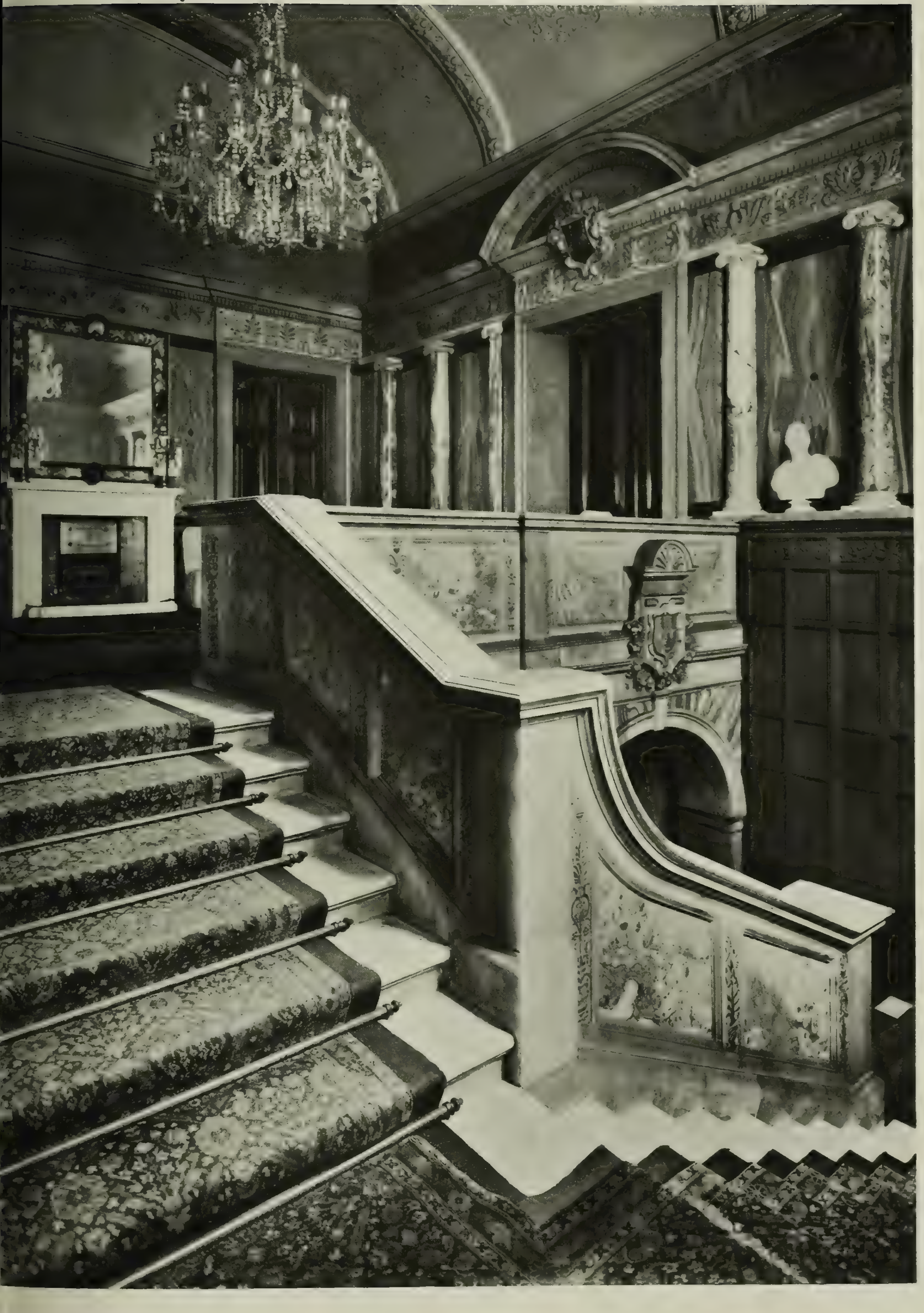

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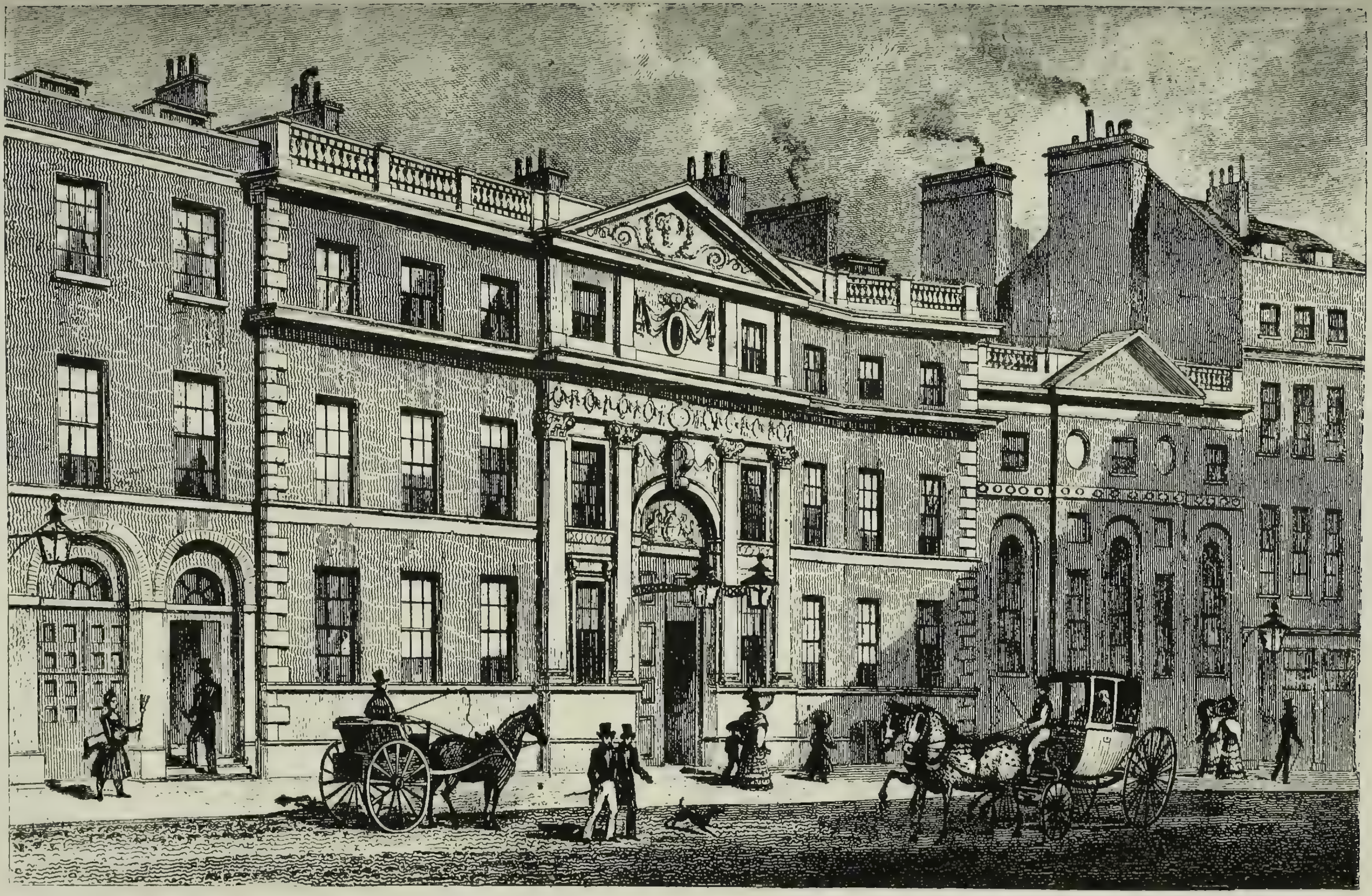

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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

CX.—No. 3824. MAY 19, 1916.

THE COMMERCIAL VALUE OF DESIGN.

WE have the reputation of being a commercial nation, and were contemptuously described as being "a nation of shopkeepers" by the great Corsican; but whether the charge is well founded or not, we have never understood
od design has a commercial value which it is wise to
se and that good art represents good business. Apart
ıe value which houses may owe to site and position, we
ıtly hear of large prices being given for them because
ın be described as being "designed throughout in the
manner" or containing "genuine eighteenth-century
ıg and chimney-pieces." And the fact that value is
o such buildings is not due alone to their antiquity,
iquity in building by itself is not an asset which has
ıe value that it possesses in the case of a book, a curio,
icture, but conveys the recognition that the buildings
ich people are willing to pay prices in excess of the
c commercial value of site and accommodation contain
ing which gives the purchaser pleasure and satisfaction,
mething being a definite artistic value.

ning to more recent times, the fact that a house was
d by Norman Shaw would always be stated in an
particulars of sale, because he would know it would
ute an inducement to the purchaser; while he would
nk it advisable to state that the house was beautifully
d and well planned by a well-known architect in 1865,
e such a date would not prove an attraction to the
e purchaser.

is therefore clear that design has an intrinsic value
rcially, and the recognition of the fact should be borne
d by all those who are building either for themselves
speculative purposes. A man who builds a house for
wants it to suit his tastes and requirements, but, since
esents capital, in most cases he will wish to have a house
can, if necessity arise, be resold.

iety and originality by themselves do not necessarily
uilding this commercial asset, for many houses built
period between 1850 and 1880 have both in a
greatly in excess of that possessed by the average
an or Adam house, and there is many an old town in
the front doors of house after house follow the same
design almost without variation.

same point applies to the design of such fittings as
and door-furniture, in which it can be said, without any
contradiction, that if our leading manufacturers ceased
nine-tenths of their stock, and only put on the market
esigns as had met the approval of those who possess
nd knowledge, they would be the gainers, for the specula-
uilder, as far as his knowledge goes, will try to buy a
class of fitting to that used in a better-class house.
ference is that economy would be promoted by cutting
stocks and ceasing to place on the market a plethora of
ntly and badly designed fittings the novelty of which
ppeals for a time to the ignorant. Similar considerations
in the design of wall-papers; there is absolutely no
why a good design should be scrapped at the end of
n, or why the expense of the production of an enormous
r of fresh designs should not be saved. Manufacturers
do well in this period to consider whether it is not worth
o work in more intimate conjunction with architects and
artists, and whether they cannot produce goods of
greater merit and at the same time save the enormous
involved in the production of ephemeral novelties. There are a few firms of grate manufacturers who are now selling goods made from designs produced twenty or thirty years ago, while the bulk of the work of their contemporaries at that time would find no sale at all. The enormous sales of old grates and mantelpieces would be checked by an improvement in the standard of design of modern work, for a comparatively small number only would be bought and sold if their only advantage over modern work was that given by their greater age.

It may be said that if one-tenth of the well-directed effort which has been employed in improving sanitary fittings and appliances for cooking, heating, and other practical objects were directed towards improving the design of ornamental and architectural accessories in building the standard of the applied arts connected with building would be radically altered, and this can only be done by the intelligent and sympathetic work of both artist and manufacturer.

What is required, briefly, in the interest of commerce as well as that of art, is co-operation between the manufacturer and artist; and the commercial importance of a better understanding between architects and builders is also evident if we consider what might be gained by it.

We cannot, if we would, replace the speculative builder or reach the happy age when no building will be erected except from the designs of an architect; but builders of education and experience can do the cause of building much good by showing their comrades whose enterprises are on a smaller scale the advantage of obtaining some amount of technical help. Many a small builder has erected house property which has let or sold well for a short time and then become unsaleable in the market because of defects of design. And yet the expense of obtaining a design for a type or types of house suitable for his purpose, and which could be repeated to a large extent, is very small even if the aid of an architect of some standing is sought. Such co-operation would be to the advantage of architect and builder alike, and would be a boon to the general public and save many localities from wholesale desecration. There are also ways in which the architect can help the builder by restraining and controverting the fallacy which we hear so much of now, the socialistic remedy of carrying out housing schemes by the direct means of municipally directed labour, without the agency of the contractor and at the cost of the ratepayer. These schemes are the outcome of inexperience, but, if the arguments on which they are based are allowed to go uncontradicted, may be productive of legislation which will press heavily on the resources of the country at a time when it will need them most. Unchecked competition has, to a great extent, had its day, and our task in the future is rather to discover how far we can obtain co-operation between those whose interests lie in the same direction, thus diminishing expense and producing the best results.

Art has become too much an individual product in the present age, and it is clear that while men of great individual talent are among us now, and artistic criticism has never been so plentiful, there is a reluctance to realise that more co-operation and less individualism might lead to better results. Many architects will insist on designing a wrought-iron gate in all its detail when a better result would be produced by a good smith who was allowed to work in co-operation with the architect from a small-scale sketch. In the one case the smith is reduced to the status of a mechanical worker, in the other he has scope for the development of his powers of design and suggestion, and, if asked to supply a gate independently, the purchaser has the advantage of the experience he has gained by independent thought.

The architect will probably work better if he has not to concern himself with all minutiæ of craft design, and the result of the process intelligently carried out will be the education of a greater number of designers and the establishment of a method of working which is nearer to the conditions prevailing in what we are apt to consider the golden days of artistic production; and while it matters little how the best result is produced, it matters greatly to the world that the best result should be effected. The value of good work is dual—its direct result and its educative influence on future work—and occasionally the last is forgotten.

And we should also like to see a better understanding exist
in the future between two schools of architectural thou
the one the revival of the academical methods and dilettan
the late eighteenth and early nineteenth century, in which
was the sole consideration; the other the arts and
movement, which has possibly concerned itself too exclu
with the resuscitation of the means by which the minor
of mediæval texture and quality can be reproduced.
have their great value in adding to the sum of modern
art, and both should join forces in endeavouring to
the commercial classes to a recognition of the all-imp
truth that architecture and the other arts are comme
important—a truth which cannot be over-estimated
commencement of the new era which will lie before us
conclusion of the present war.

NOTES.

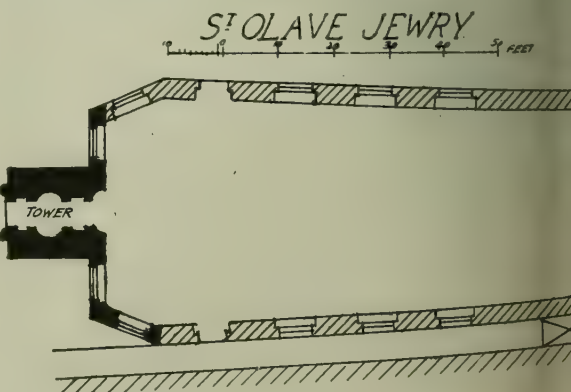
Aircraft Insurance. There are many surprises in store for the public in connection with the State system of insurance against damage inflicted by the enemy by aircraft and bombardment, and one of these was disclosed in a question put to the Government in the House of Commons on May 8. The question was whether a claim under a Government policy had been rejected on the ground that the assured had signed a coupon issued by a daily paper insuring him against damage from aircraft and had not exhausted his rights against this paper. The reply on the part of the Government was that a newspaper insurance coupon is as much an existing subsisting insurance as any other policy, and the claim against the newspaper must be exhausted before the Government was liable on the official policy. According to the questioner's statement, the assured in this case had failed in his claim against the newspaper because he had made it out of time, and apparently the Government is to benefit by this slip. In a recent case in the House of Lords, relating to the forms under the Finance Act and land taxation, one of their lordships characterised the action of the Government Department which issued the form as more befitting a company promoter than a Government Department. Is the same observation to be applied to the system of Government insurance? This form of insurance is an entirely new departure. Hitherto taxation for the maintenance of the Navy and Army has always been justified on the ground that citizens must pay for the security afforded them by these forces. The security is absent, and the insurance premiums are an additional form of taxation to secure indemnity against a form of damage which it has always been assumed the Government in a civilised State could and would provide against. The new system has been loyally accepted by a long-suffering and law-abiding people, but let us hope that it will not be administered in a pettifogging spirit. There are other objectionable clauses in the policies issued under the Government scheme, but we cannot refer to them in this note.

A School of Landscape Architecture. American Universities aim at thoroughness, and every facility is given for the acquisition of knowledge of various kinds. We have before us a prospectus of the School of Landscape Architecture, instituted in connection with Harvard University, the staff of which consists of a professor, an assistant-professor, an instructor in Horticulture, an instructor in Landscape Architecture, a lecturer on Landscape Architecture, and a librarian. Instruction to students is also given by the Dean of the Faculty of Architecture and the instructors in Architecture and the Fine Arts. The degree of Master in Landscape Architecture is given to students who satisfy the examiners in the following subjects:—1, Landscape Architecture as a Fine Art; 2, Practice in Design, Estates, and Related Problems; 3, Design—Park and City Planning; 4 and 5, Principles of Construction; 6, The Nature and Management of Trees, Shrubs, and Herbaceous Plants; 7, 8, and 9, Plants in Relation to Planting Design; 10, Principles of City Planning; and 11, Elementary Drafting. Besides all this, the student is advised to take a wide course of a more purely architectural kind. There is one consolation to the student who seeks future fame, which is that a prospectus sounds more formidable than actual experience proves it to be. Still, Strafford's motto, "Thorough," is reached, to our minds, by the foregoing little list, which we find in a prospectus of sixty pages!

The Manchester Society of Architects. The annual Report of the Manchester Society of Architects is like that of the R.I.B.A., on a diminished scale. The membership is 272, and among those who have volunteered for active service the Council regret to have to announce two deaths—those of Mr. George Barlow, Associate, killed at Gallipoli, and Mr. C. R. Edwards, student, killed in France. In all, seventy-nine members (Fellows, Associates, or students) have joined his Majesty's forces in various capacities. The Society's deputation to the City Council on the subject of Official Architecture is carefully and well drawn up,
but no answer has yet been sent them, though it is stated the
tion was sympathetically received. The Council has been
in conjunction with the Architects' War Committee in Lond
a scheme of civic survey has been formed, with Professor Aber
and Mr. Isaac Taylor as co-directors, which has found work fo
Manchester practitioners who are making a comprehensive
survey of South-East Lancashire and the surroundings of Li
It is to be hoped that next year we may be able to rec
resumption of full professional activities; at present the re
every professional body is somewhat gloomy and monotonou

Russian Trade. A Russo-British Trade Exchange has been
the object of which is to establish in Mosc
in London exchanges where the products of
countries can be sold—Russian products in
and English products in Russia. The idea is to have e
showrooms which will be permanently open, and also office
modation which can be let for temporary uses. The Trade E
will provide all services, including, in Moscow, the prov
Russian staff, competent assistants, travellers, agents, and l
together with an Anglo-Russian clerical staff. The showroo
be divided into sections for various trades. Floor space
charged on a rental basis—it is suggested 100 sq. ft. at £
year, including all services and representation. The p
rentals, even with the services included, strikes us as being so
high for permanent exhibitors, but that is merely a point of de
does not militate against the merit of a well-conceived pla
address of the Exchange is 16, Regent-street, London, but it is
out that it has no connection with the Russian Chamber of Co
which occupies offices at the same address.

A Suggestion. It has sometimes occurred to us when we hav
of some striking instance of the passion of an
Government to show its fairness by neglect
interests of British subjects that it would be an excellent pl
could become aliens—we do not say alien enemies. We be
this could be effected, our trade interests would more often
a matter of concern to the Government of the day, who wo
they were free from any suspicion of favouritism. Meanw
Hughes's eloquent arguments show the greater clarity of visio
comes to those who have learnt to understand wide issues,
becomes increasingly difficult to reconcile old theories whi
been recognised as established truths with the practices
trade rivals. We could not believe in the possibility of war
was forced upon us, and it sometimes seems that we shall not
in the possibility of that great trade war which will inevitabl
the conclusion of peace until we have to face the strugg
more unprepared. Though we hope for the best, there is an i
amount of prejudice and inertia to overcome if we are to h
own commercially when peace comes, and there is room fo
spadework if we mean to make up leeway.



Wren's Churches. (*See page* 365.)

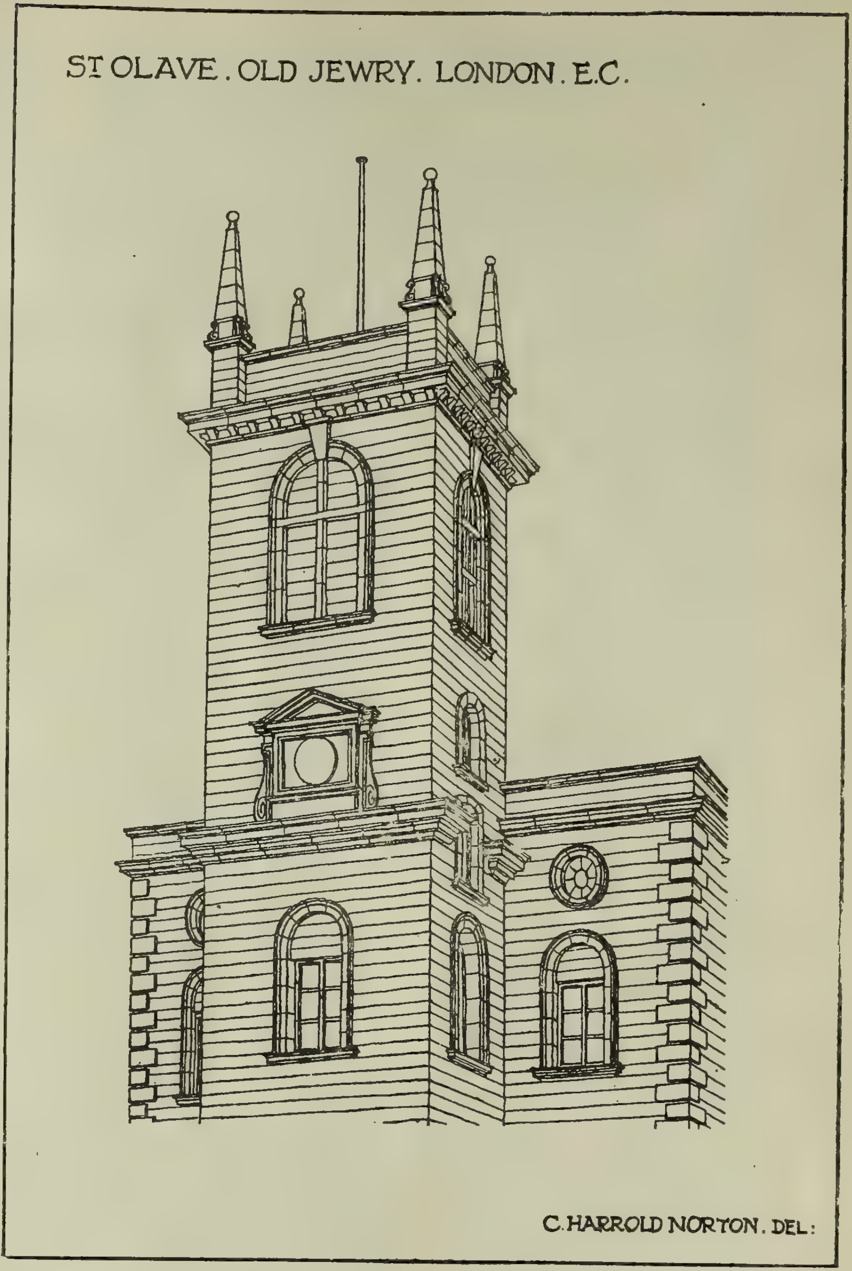
E LONDON CHURCHES DF WREN AND LATER RCHITECTS OF THE ENAISSANCE.

No. XXXIV.—St. Olave Jewry.

. OLAVE JEWRY was situated between Iron- ger-lane and Old Jewry, its east end ting on Old Jewry. It was built between -79 at a cost of £5,580. The church has pulled down and devoted to secular uses, the tower still remains as part of St. aret's Rectory, the parish being united that of St. Margaret, Lothbury. The of the demolished church, with those of ntholin, Watling-street, and St. Benetfink h are now demolished), are among the singular devised by Wren. But, though design of two former churches had a clear n *d'être*, which was the use of the ellipse *motif*, the reason which impelled Wren dopt the curious coffin-shaped outline of lave is more obscure. In all probability uld seem that the two long tapering sides those of the boundary of the site or of old upon it, and the shorter cants which the outline of a coffin were meant to correct unpleasant appearance which would have otherwise given by the acute angles ed by the northern and southern walls at junction with the west front.

this as it may, a comparison of Wren's hes with those of his successors shows that occupied an intermediate position between mediæval builders who were indifferent gularity and the classic schools which have prone to give it undue importance.

e churches of Wren, excluding that of James, Piccadilly, but including those demolished, cost £263,786 10s. 4½d., as own in some contemporary records which fortunately discovered by Mr. Lawrence ver and communicated to the Society of uaries* in the form of a paper. The ls given, which include the names of hief tradesmen employed, also prove that wonderful series of buildings was entirely work of native craftsmen, thus possessing im on us which is absent from the work ose later architects who were in many partially dependent on imported talent.


ST OLAVE . OLD JEWRY . LONDON . E.C.

C. HARROLD NORTON . DEL:

HAKESPEARE'S LONDON."

SIDNEY LEE presided at a meeting of the on Society held at the Society of Arts, phi, on May 11, when Mr. T. Fairman h gave a lantern lecture on "Shakespeare's on."

e Chairman said he understood that the on Society had for its aim the improve- and the development of their great city, hief city of the Empire, on lines which respect the best principles of architecture the best aims of civilisation. Well, the principles of architecture and the best aims vilisation were synonymous terms. No t better deserved the support of London ns and of the municipal authorities, who not always inspired by artistic ambitions, t was in keeping with the beneficent aims e Society that in seeking provision for the e it should seek inspiration also from the The architectural reconstruction of on was not, he imagined, the desire of ne of ordinary sagacity. The prudent mer knew the value of historic continuity the wisdom of respecting tradition which ed respect, and architectural reform would a larger measure of approval the more it showed itself to national memorials or e memories of the great men who had d the nation to its fame. Shakespeare almost universally looked upon as the est of Englishmen, and for the London ty to keep alive memories of Shakespeare in accord with the enlightened purposes e Society. To acquaint themselves with aspect of Shakespeare's London was to home very graphically the full significance of many passages of his plays which might otherwise be obscure.

Mr. Ordish said the main outline of his subject appeared in the three riverside views exhibited on the walls. The first was the drawing by Antony Van der Wyngaerde, which represented Tudor London and showed some of the changes which ensued upon the Reformation. The second was the view of Visscher, dated 1616, which was a picture of Jacobean London. The third view was that of Hollar, dated 1647. This showed London when the Elizabethan tradition and the theatres were on the point of being effaced. It was the London which disappeared in the Great Fire. The great monastery of the Carthusian monks, called the Charterhouse, and the open space of Smithfield were well shown in the Wyngaerde drawing. On August 6, 1564, Queen Elizabeth came from Hampton Court on a visit to Howard House, as the Charterhouse was called, when Sir Edward North parted with the property to Thomas Howard, Duke of Norfolk. The Duke added the screen to the great hall. Sir Sidney Lee placed the coming of Shakespeare to London in the early summer of 1586. An engraving of Hoefnagel, which bore the arms of Queen Elizabeth, and therefore must be later than 1558, showed St. Paul's with its beautiful spire, which was destroyed by lightning in 1561. The engraving showed London about midway on its course of transformation. Those who walked the streets of the London depicted saw on every hand the ruins of the ancient order as the background of new conditions. Here were palaces where formerly stood monastic buildings. London was losing its character of a garden city. The open spaces and gardens of the dissolved religious establishments were being rapidly filled up with buildings. The lecturer proceeded to exhibit a large number of slides of the map of Ralph Agas, as reproduced by the London Topographical Society. It bore the arms of James I., but contained undoubted evidence of being an Elizabethan document. The map showed St. Giles-in-the-Fields, and the "Waye to Uxbridge," by which Shakespeare came to London. As he came along Holborn he passed the residence of Lord Southampton, the patron to whom he dedicated the first heir of his invention a few years later; the houses of the Staple Inn frontage, which still existed much as he saw them; and Ely Place, where he afterwards laid the scene of the death of John o' Gaunt in the play of "Richard II." If he came on foot he entered the City by Newgate. Smithfield and the church of St. Bartholomew the Great were well shown, and so was the line of the wall. The bastion shown at the angle below St. Giles', Cripplegate, was perhaps the one of which the remains were visible to-day. Mr. Ordish pointed out amongst other places the house of Mountjoy at the corner of Monkswell and Silver streets where Shakespeare sojourned later; Aldermanbury and the church of St.

The Complete Building Accounts of the City hes (Parochial) Designed by Sir Christopher " By Lawrence Weaver, F.S.A. 1915.

Mary the Virgin, the Guildhall and Mercers' Hall; the Royal Exchange, clearly added since the original engraving of the plate; the Eleanor Cross which stood in Cheapside; the Mermaid Tavern, standing between Friday-street and Bread-street; and Bishopsgate, with Shoreditch Church in the distance. Within the Bishopsgate was the precinct of the dissolved Priory of the Nuns of St. Helen's, and Shakespeare was living as a denizen of the precinct in 1596. Westminster and Whitehall were next dealt with. Westminster Hall happily existed to-day, and here Shakespeare laid the scene of the deposition of "Richard II." The lecturer showed a number of slides depicting the scenes on the Thames, which was the great highway of London in those days, and quoted passages from the plays of Shakespeare which must have been inspired by the things he witnessed. London Bridge, the Tower, and Eastcheap, where stood the Boar's Head, were described, as were the amphitheatres on Bankside for bull-baiting and bear-baiting. One slide was that of the yard of the Bull and Mouth Inn, which showed the galleries as they existed in Elizabethan times. If they added a platform stage, such as was set up in inn yards, they had the playhouse in its main features such as was first established by Burbage in Shoreditch in 1576. Engravings by Hollar of Durham House, where Raleigh resided, and of Arundel House and Salisbury House were exhibited. The Norden map of London, published in 1593, contained the earliest known representation of a playhouse—The Rose—where some of Shakespeare's earliest dramatic works were produced. In the winter of 1598-9 the Burbages removed their theatre from Shoreditch, set it up at Bankside, and named it the "Globe." Speed's atlas, published in 1611, contained the picture of London by Hondius, showing the "Globe," in which the most vital of Shakespeare's plays were produced between 1599 and 1613. Another view of London showed all the Bankside theatres as they existed together. One of the last slides shown was a view of Winchester House, with the park and Bankside behind. Mr. Ordish contrasted the condition of this district as it was in Shakespeare's day with its present sordid aspect, and strongly endorsed the suggestion of a writer in the "Pall Mall Magazine" that the proposed new St. Paul's Bridge, which will cut right across Bankside, might well be "Shakespeare's Bridge." If monumental sculpture might form part of the memorial it might be adorned with statue groups suggested by the plays.

The Chairman, in proposing a vote of thanks to the lecturer, said there arose a feeling of regret that so many of the beautiful buildings shown existed no longer. He felt it a most desirable thing that when new buildings took the place of old ones some tablet should be placed on the new building to remind them of the associations of the old. They must congratulate the London County Council on carrying out that very desirable work, and as students of history and literature they would be still more indebted to the Council if they could place some little representation of what had passed away. Something of the kind had been done at Southwark. That district was now a wilderness of warehouses, and there was very little which could be said to be interesting or architectural. The site of the "Globe" was now largely occupied by Messrs. Barclay, Perkins, & Co.'s brewery, but it was a very good idea to place on the outside wall of one of the buildings a pictorial representation in relief of the old Globe Theatre and the buildings adjoining. A few of the old buildings remained, and these they ought to preserve at all hazards.

Mr. W. J. H. Leverton, in proposing a vote of thanks to Sir Sidney Lee for presiding, said that in comparing Shakespeare's London with the Metropolis of the present day it was noticeable that, although we had a large number of fine buildings, the average of everyday architecture was much below that of the Shakespearean era. Something was "out of joint," and the London Society was founded to "set it right." Its aim was to raise the average, to banish mediocrity, and make all work together for the common good.

The votes of thanks having been heartily agreed to after further discussion, the proceedings terminated.

NATURAL CEMENTS.

There are probably many users of cementing materials who associate little that is definite with the expression natural cement, or who connect the designation solely with Roman cement, now a scarcely-used and largely discredited material. Since, however, some of our so-called limes are really natural cements, and, as this class of cement is imported and sometimes disguised to resemble Portland cement, a knowledge of the character of these bodies and their relations to the limes and to artificial cements is essential. Though admittedly little used in this country, these natural products are of great importance elsewhere, in America particularly, where they take the place almost entirely of our hydraulic limes.

The essential characteristic of a lime is that it "slakes," or, in other words, that it contains always a large quantity of free calcium oxide (lime) after burning; which, though it confers no strength, is necessary as a disrupting agent which breaks up the hydraulic constituents, and thus alone admits of their redistribution, causing "setting." In cements, whether natural or artificial, this excess of lime is absent, hence these materials do not break up after burning on the addition of water, but must be first finely ground. If, therefore, they possess a composition representing a high hydraulicity, and are burnt at a temperature best suited to develop this, cements as a class are necessarily stronger than limes, since the excess of free lime, which is useless as a final binding agent, is absent.

Natural cements, as the name indicates, are made from some material mined or quarried which, when burnt, yields a cement without the addition of other ingredients. All the stones used for this purpose belong to the limestone class, and indeed certain stones ordinarily burnt as limes can be burnt to form natural cements. The stones employed are, however, essentially siliceous and argillaceous (clayey) limestones, and generally contain sufficient iron to give a brown or, at least, yellow tint to the burnt product. The natural material, again, usually possesses an earthy smell, due to its clay content.

One of the chief sources of natural cements in this country used to be the clayey nodules known as septaria, collected chiefly on the east coast, and, though this industry has long since languished, the composition of these nodules may be given as illustrating the nature of these materials. Septaria from Harwich:—Silica, 21·9 per cent; alumina, 3·5 per cent.; iron oxide, 8·2 per cent.; lime, 32·4 per cent.; carbon dioxide, 28·4 per cent.; magnesia and alkalies, 3·8 per cent.; water, 1·8 per cent.

The burning of natural cement rock is effected in kilns much resembling those used for lime-burning, and the temperature attained varies, or should vary, considerably with the composition of the rock used. The resulting product consists partly of hard clinker, partly of friable material, and also of inert, unburnt matter; but it is a mistake to assume, as is generally done, that the clinker is always the best part of the "draw." If the percentage of silica is high the clinker, when ground, may be inferior to the friable constituent; but if low then it does form the most valuable part of the product. The grinding is effected in the most modern plants in tube mills, though edge-runners and other more primitive methods of attrition are still in use.

The now little-used Roman cement is usually regarded as the representative of this class in this country, but in reality several of the materials called hydraulic limes fall under this heading. Some of the so-called Lias limes, for example, are natural cements, and, though sold as limes, they have to be artificially ground by the makers after burning, and possess other characters now to be cited which distinctly place them in this category.

Natural cements are lighter, bulk for bulk, than Portland cement. The specific gravity—that is weight compared with an equal bulk of water—of Portland cement is about 3·1; but natural cements hardly ever rise to this figure, and their specific gravity may be as low as 2·7. They are further distinguishable by setting much more rapidly, which is due to their large content of alumina. Now, though the colo and rapid setting of natural cements mak them ordinarily easily recognisable witho recourse to a laboratory, adulteration—alwa easy in the case of a powdered material— unfortunately practised in the case particula of certain imported brands, and, further, certain cements produced from stones whi possess a composition resembling that of t ingredients used for Portland cement known as "Natural Portlands," an ea opportunity for fraud without much legal ri occurs when Portland cement is specifi without specific qualifications as regards source and qualities. The addition of grou cinders can disguise the colour, while sulpha of lime may be added to reduce the rate setting, both ingredients considerably decreasi the value of the cement, and, though the ent absence of sulphate of lime is not to be expecte inasmuch as the natural materials may legi mately contain a little of this compound, t amount necessarily added to slow down t setting of these highly aluminous cemen to compare with Portland is so great as to definitely injurious.

No standard specification for natural cemen is in general use in this country, but in Ameri where, as stated, these cements take the pla of our hydraulic limes, the requirement is oft made that a 1-in. briquette of neat cem shall withstand in tension 200 lb. after twent eight days, and a briquette, half cement a half sand, 150 lb. after the same interval. natural cements are poor sand-carriers, th strength decreasing very rapidly with increa proportions of inert matter, a fact which shou be remembered in comparing their cost w that of Portland cement.

CORRESPONDENCE.

The Prevention of Bribery.

Sir,—In reply to your "Note" on "The P vention of Bribery" I should like to point that the Bribery and Secret Commissio League, Incorporated, is within a few mont of being ten years old, and has a membersh of over 400 members, and affiliated to t League are a number of important trade bod with a very large aggregate of membersh Experience has shown that there is a consid able value in a large body being banded toget to suppress an evil. The League has be working after the fashion, but after a lo interval, of the Royal Society of Preventi of Cruelty to Animals and the National Soci for the Prevention of Cruelty to Childr Many persons have found the League a supp in their objection to give bribes, and ma I do not doubt, have found the fear of t League—and of the law—prevent them fr asking for or accepting bribes.

The Secretary,
Bribery and Secret Commission
Prevention League, Incorporated

FIFTY YEARS AGO.

Westminster.

With reference to an observation report in our last number, touching the railw works now going on in front of the Abb and the fear lest a station should be plac there, we are told by one who ought know that the station of the line now course of construction (that of t Metropolitan District Railway) is to be Canon-row. To this there can be objection, but it is to be hoped that it w not be allowed to obliterate the na "Canon-row," which, whether it be deriv from the channel of the Thames, that form the north-eastern boundary of Thorn Island, or from the canons of St. Stephen is one of the most interesting histori reminiscences of the neighbourhood.

[⁂ From the *Builder* of May 19, 1866 Ed.]

BOOKS.

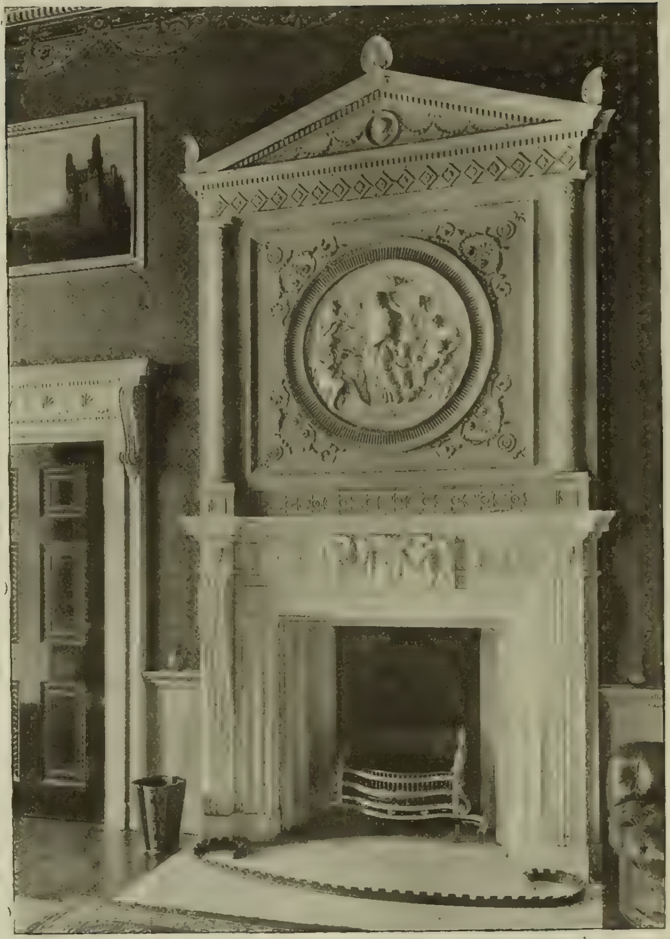
thic Ornaments. By A. PUGIN. (Published by Messrs. J. Tiranti & Co., 13, Maple-street, Tottenham Court-road. 12s. 6d.)

E have received a copy of an excellent reproction of Pugin's "Gothic Ornaments," comising over ninety plates, the illustrations being every respect equal to those in the original lume. There is little doubt that many idents and others will be glad to have a copy this well-known work, which is both a collecon of interesting mediæval ornament and a stimony to the untiring and devoted work of great Gothic enthusiast, whose name is emorable as a pioneer of the Gothic revival.

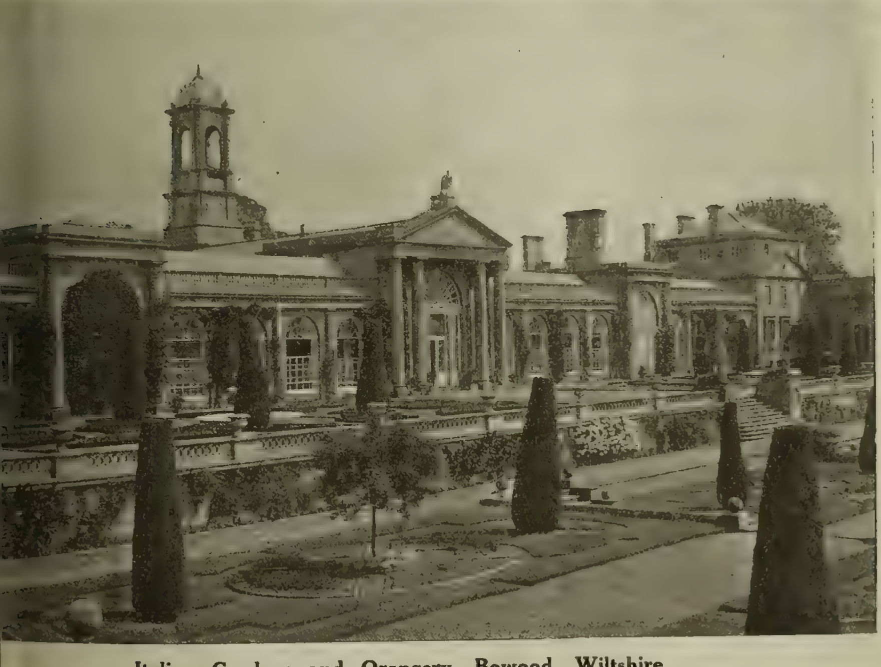
bert Adam and His Brothers: Their Lives, Work, and Influence on English Architecture, Decoration, and Furniture. By JOHN SWARBRICK. (London: B. T. Batsford, Ltd. £2 2s.)

E give two from among the many blocks iich supplement the whole-page collotype istrations in the interesting and useful work Mr. James Swarbrick. The chimneypiece own from Harewood House, Yorks, is a good ample of the adaptability of the style in rk of comparatively simple and inexpensive aracter. The beautiful medallion in the ntre of the plain panel over the chimneyece gives a decorative finish and completion the design at a minimum of actual expense, d it is in such features that the mastery of e brothers Adam can be best understood. their work the utmost architectural value is tained by the due relation and disposition very simple mouldings and well-ordered aces, effects which involved the use of aborate woodwork in Elizabethan and cobean work, and in later periods a more onumental note which was at once more stly to execute and called for a greater note elaboration in furniture and decorative cessories.

The second illustration given shows the alian gardens and orangery at Bowood, in iltshire, a very pleasing instance of careful esign, in which full architectural value is tained with a minimum use of architectural aboration. The Adam style suggests rest d refinement as thoroughly as the best aroque work is instinct with vigour, fancy, d richness, and therefore is more applicable the ordinary architectural problems of an e which is more utilitarian than that which w the birth of the richer and more sumptuous pressions of the Renaissance in art. Our lmiration for the genius of men whose work as founded on an intimate study of the gorgeous productions of Italy and France, and who yet could produce what was perfectly adapted to the sobriety and utilitarian wants of England of the Georges, must indeed be great, and a careful study of the work of the brothers Adam will prove of use both to the practising architect and the architectural student, for it is work which will live because it was perfectly adapted to the requirements of which it was the outcome and solution.



Chimneypiece: South Library, Harewood House, Yorks.
(From "Robert Adam and His Brothers.")



Italian Gardens and Orangery, Bowood, Wiltshire.
(From "Robert Adam and His Brothers.")

NEW GOVERNMENT CONTRACTS.

War Office.

Paint.—L. Berger & Sons, Ltd., Homerton, N.E.; Blundell, Spence, & Co., Beverley-road, Hull; Cowan Bros., Ltd., 37, Marsh Gate-lane, Stratford, E.; Pilchers, Ltd., Morgan's-lane, Tooley-street, S.E.; Whiffen & Sons, Ltd., Lombard-road, Battersea, S.W.; Wilkinson, Heywood, & Clark, Ltd., Storer's Wharf, Poplar, E.

Works Services.—Alterations to hutments at Cherryhinton: Clark & Sons, Abbey Building Works, Cambridge; electric light, etc., at Crayford: Pinching & Walton, 52, Cannon-street, E.C.; electric light at Clipstone Camp, Mansfield: V. G. Middleton, Broadway-chambers, Westminster, S.W.; electric light, etc., at Park Hall, Oswestry: V. G. Middleton, Broadway-chambers, Westminster, S.W.; heating rooms at Cannock Chase, Clipstone, Oswestry, and Rhyl: Leeds Fireclay Company, Ltd., Wortley, Leeds; heating guardrooms at Dreghorn: H. J. Cash & Co., Ltd., Caxton House, Westminster, S.W.; gas lighting, etc., at Park Royal: The Brentford Gas Company; gas lighting, etc., at Churchill Estate, Plumstead: South Metropolitan Gas Company, 709, Old Kent-road, S.E.; installation of hydro therapeutic unit at Manchester: Fearnley & Sons, Brighouse-street, Manchester; water services, etc., at Eltham, Wickham, Welling, and Bostall Heath: H. T. Perryman, 9, Market-parade, Stafford-road, Wallington.

STATUE OF KING EDWARD, TORONTO.

Mr. W. S. Allward has been appointed to execute the statue of King Edward for which a site is chosen at the corner of the eastern departmental block overlooking Connaught-square.

THE CRADOCK MEMORIAL IN YORK MINSTER.

The mural memorial to the late Rear-Admiral Sir Christopher Cradock, who perished with his ship, the *Good Hope*, in the battle which took place off the coast of Chile, is to be unveiled in York Minster on June 16. The memorial is the work of Mr. F. W. Pomeroy, A.R.A.

LAW REPORTS.

OFFICIAL REFEREE'S COURT.
(May 8th.)
(Before Mr. POLLOCK.)

Heavy Claim by Builders:

Spencer Santo & Co., Ltd. *v.* The Commissioners of H.M. Works and Public Buildings.

THIS was an action in which the plaintiffs, a well-known firm of builders, claimed £97,109 as balance of charges under contract with H.M. Commissioners of Works for erecting the new Local Government Board offices at Whitehall. The hearing, which is being taken in the Railway and Canal Commissioners Court for convenience owing to the large number of documents and exhibits involved, is expected to occupy several weeks.

Mr. Holman Gregory, K.C., Mr. Compston, K.C., and Mr. Inman, instructed by Messrs. Turner & Co., appeared for the plaintiffs, and Sir Robert R. Acland, K.C., with Mr. Lowenthal and Mr. Giveen, instructed by the Treasury solicitors, were for the defendants.

Mr. Holman Gregory, K.C., in the course of a lengthy detailed opening for the plaintiffs, said that by a contract in writing, dated April 14, 1902, the plaintiffs undertook for a sum of £473,000 to build and complete certain public offices at Westminster, and they now claimed for balance of the price of work done and materials supplied in the erection of those buildings, which were situate at the corners of Parliament-street, Charles-street, and Great George-street, a work which extended over a period of five years. The plaintiffs entered into a contract to erect the buildings in accordance with eighty-two drawings which had been prepared by the architect, named Brydon, but, in fact, they were called upon to erect a building which was entirely different from the original drawings. Not one of the plans of the drawings was conformed to, with the exception of one which related to the fire hydrants. The building as erected was quite different from that provided for by the contract. The only thing that was the same was the outside elevation. In appearance it was the same building, but, in fact, it was quite a different building. After the contract was signed other plans were given to the builders to build to, which provided work to be done and was of an absolutely different character to that provided for by the contract. The building so far as the internal arrangements were concerned was not the same. The plaintiffs made their preparations to erect the building, but before they commenced changes were made, and from time to time further changes were made, until in the result the whole structural character of the building was altered. Frequently the plaintiffs were supplied with fresh drawings in place of the contract drawings, as well as with fresh instructions. The plaintiffs duly completed the building in accordance with the fresh drawings and instructions, but the changes and reductions in the different parts of the building made the materials and work, particularly the masonry, brickwork, and steelwork, far more expensive in proportion than they would have been in a building constructed according to the contract documents. Another story was added to the building, and by a process of what was called "skinning the work" the builders were told to put up this other story, and were told that they were entitled to £406,000 instead of the £473,000, although, in fact, they had expended upon the building much more than the contract sum, caused to a great extent by reason of the altered character of the building put up and not having received proper instructions. There was also a serious breach of contract in respect of the supply of Portland stone. It was provided by the contract that the plaintiffs were to obtain the Portland stone required for the work from the Bath Stone Firms, Ltd., with whom, as stated in the contract, the defendants had entered into a contract for the supply of the stone. In order that the stone supplied might be of proper quality, it was provided that the representative of the defendants should inspect the blocks and stone required previous to their being stacked for the plaintiffs' exclusive use in the work, and that the requisite quantity of stone to meet the plaintiffs' requirements would be at all times ready in the stacks, and that no delay should occur in the delivery of the stone when ordered. The defendants had failed to carry out these conditions, and a large portion of the stone was not of proper quality and was condemned after arriving at the work. As the defendants failed to take steps to enforce their contract with the Bath Stone Firms, there was seldom sufficient stone in the stacks to meet the plaintiffs' requirements, and there was great delay and irregularity in delivery, whereby damage was suffered. Further, it was alleged that the defendants wrongfully purported to exercise their power in the contract provided of omitting work for the purpose, not of omission, but in order to give such work or work substituted for it to other contractors, and extra work which ought to have been ordered of the plaintiffs was given to other contractors, for which the plaintiffs claimed a fair and reasonable price. The plaintiff company was a well-known building firm registered as a company in 1898. They had a large working capital, and up to the time of this contract were in an exceedingly flourishing condition. Unfortunately, in consequence of what had happened during the erection of these buildings, they were not in 1910 in such a successful position, and in 1911 an order was made to wind them up, and the present action was being brought under an order of the Court on behalf of the debenture-holders. The building erected by the plaintiffs, and in respect of which they were claiming, had a frontage of 600 ft. in Charles-street, 300 ft. in Parliament-street, and 250 ft. in Great George-street, and provision was made for lighting and ventilation of three large courts and ten smaller ones inside. Before November, 1901, Mr. Brydon, the architect, died, and Mr. Tanner, now Sir Henry Tanner, was appointed architect in his place. The plaintiffs further said that they were greatly delayed and the works were disorganised by the non-supply and delay in supply of instructions, drawings, and details, and by the failure of the defendants to order and their delay in ordering goods and work to be supplied, and by failure to select and supply materials for the work, and by supplying materials of an inferior character. Under the plans and drawings it was contemplated that in the proposed building there should be six floors, three below the ground level and three above, and that the main part of the building should be of brick and that all joists and other details of that kind should be of steel. The defendants covenanted that the architect could from time to time certify the sums to which the plaintiffs were entitled under the contract; but he never did so certify, and the sum paid to the plaintiffs was far short of the sum to which they were entitled.

In the course of his speech, which occupied three days, counsel incidentally mentioned, in relation to the plaintiffs' complaint of alterations, that during the progress of the work there were no less than 436 separate and distinct variations in the plans and drawings, and in many instances they were variations upon variations.

The hearing had not concluded when we went to press.

Dangers of Surveying.

AT the Brentford County Court his Honour Judge Scully recently concluded the hearing of an important case in which Francis Daniel Brill, surveyor, of Waldemar-avenue, Ealing, sued Thos. Hy. Bolam, dentist, of Broughton-road, Ealing, for £31 10s. damages for personal injury.

Mr. Dunbar was for the plaintiff, and Mr. W. M. Duckworth for the defendant.

According to the former, the defendant instructed plaintiff to visit his premises, 39A, George-street, Richmond, to inspect the top floors, tenanted by a housekeeper. Plaintiff duly attended, and saw a leakage through the roof. To see the outside of the roof he proceeded to open a dormer window. The sash lines were broken, and directly he pushed back the catch the top frame fell, jamming his fingers in such a way that to get them free the sash had to be prized up. Two fingers were very lacerated, and he was kept from following his employment for three weeks. His earnings prior to the war he put at £10 a week, but they had fallen to £8 8s. He claimed three weeks at this sum and special damages for pain and suffering.

Plaintiff gave evidence supporting the opening, adding that the sash cords must, from a subsequent inspection, have been broken for months. He himself surveyed the place before defendant took it nine months before. The proper way to get at the roof was by a ladder, but he chose the window because he could see all he wanted from it.

The defendant, in his evidence, said that he had no idea that the sash lines were broken. He was not daily at the premises, which were in charge of an operator and housekeeper. Neither had disclosed to him the defective window.

Mr. Duckworth argued that there was no hidden trap, and the case did not come within any one yet settled. The nearest approach to it was a Scotch case, in which the wo governing the judgment were "knew or ou to know." Here the defendant did not kn and no person about the house told him. T premises were done up nine months before, a defendant had never been in the rooms at all.

His Honour: But ought he not to know, a on whom lies the duty of knowing? If invite a friend to dinner, am I under a duty not to him to investigate the due safety the stairs or the chairs?

Mr. Duckworth thought not. That would going too far. But if a builder had gone this roof and fell through, the defendant wo have been told he ought to have had surveyed previously to satisfy himself of security or otherwise. If it were held he ou to know, he would have to prowl round house every day to look for dangerous defe That was a *reductio ad absurdum*.

His Honour: But someone ought to kn and on whom is that duty?

Mr. Duckworth: Much depends on person invited on to the premises. Here plaintiff is a person who, by professional tra ing with surveying dilapidations, should h suspected danger.

Mr. Dunbar contended that plaintiff, find the rooms furnished and occupied, would justified in imagining that the window in daily or frequent use, and therefore safe.

His Honour: What could the defendant h done to warn the plaintiff?

Mr. Dunbar: He could have warned through the housekeeper as his agent.

His Honour: What is the owner of a ho to do with regard to discovering defects bef he invites a man to enter?

Mr. Dunbar: It is referred to by implicat in many cases. There was implication here t the housekeeper suspected something was wro with the window, as she never opened it.

His Honour: It is her duty to the defend to tell him. She has no duty to the plaintiff

Mr. Dunbar: But defendant when he let rooms to the housekeeper should have seen windows were safe.

His Honour: That is his duty to her.

Mr. Dunbar finally submitted that a n ought to know of the defects in his house.

His Honour, in giving judgment, said action was founded on the principle expound in the well-known case of Indermaud *v.* Dam regarding the duty of an occupier towa persons who, by invitation, express or impli came into the occupier's premises for the p pose of his business. That principle would apply to persons who were guests, but h plaintiff, a surveyor, was engaged professiona by defendant to visit his premises. It was duty of the occupier, the case laid down, take reasonable care to prevent damage to invitee for any danger by removing the dang and giving warning. In Norman *v.* the Gr Western Railway it was required that a plain must prove that there was some danger wh was for him unusual and unexpected. T questions that arose were: Ought plaintiff have known or suspected the danger, or oug the defendant to have told him about danger? It was stated in the *Mowcock* case, the Admiralty Courts, that the owner of wharf was liable to notify to a shipmaster the condition of the bed of the dock, and, in much as the tides affected the bed, there no doubt of the soundness of the decision. this case a window was involved, and it not something affected by tides or weathe The occupier might not know of the defect, he might know it and not appreciate that was a danger to the invitee, although in latter instance it was his duty to give a wa ing. Then there was the point: Was occupier bound to make careful examination the premises to see if there were defects a dangers, and must he be deemed to know danger, hidden or otherwise? It was reasonable that he should search for defe and dangers, and, moreover, the ordina householder would not possess the necessa technical knowledge to find out and det defects and, maybe, sources of danger. T settled cases gave little help in deciding extent of an occupier's liability to find defects, but neither reason nor author suggested to him that it was the duty of inviter—the occupier—to inspect the premi or find out defects. In this case the eviden showed clearly the defendant did not know the danger, nor did his housekeeper. Bo knew the window cords had not been attend to for very many months, but was th sufficient to warrant them suspecting dang He thought not, particularly as it was no pa of the definite instructions to use the wind for looking on to the roof. He found for defendant, with costs. Notice of appeal given.

NERAL NEWS.

"The British Architect."

ll be of interest to our readers to know ır contemporary *The British Architect*, rty-three years of continuous publication, ısed to appear weekly, and that it will duced as a monthly magazine in an d and improved form. The first issue contemporary as a monthly will appear eek.

sh Mural Monuments and Tombstones Seventeenth and Eighteenth Centuries."

is the title of a book which Messrs. d will publish this month. The volume ntain numerous reproductions of photo- to a large scale, specially taken under ection of Mr. Herbert Batsford in various f the country, with the intention that ould be representative of the best work period, and form a source of inspiration present time. Mr. Walter H. Godfrey, ct, F.S.A., has written an introduction tes to the photographs.

The Committee on War Damage.

eeting of the Executive Committee was cently in the Hall of the Brewers' Com- London. The following resolution was :—" That the Committee reaffirm their ination not to ask the Prime Minister ive their deputation until they are in a n to prove beyond fear of contradiction hey have the support of the country prayer of the memorial, viz., that the ment abandon their scheme of War e Insurance, return the premiums paid; and provide out of national for compensation to those who suffer e from the attacks of the enemy. r, that efforts be made by means of the meetings to obtain the requisite support the next payments of premiums become iz., July 19 next." At the close of the Guildhall meeting the number of pal authorities who had resolved to join presentation of the memorial was 394. as now increased to 430.

sh Furniture at the Victoria and Albert Museum.

Frank Green, of Treasurer's House, York, ently presented to the Victoria and Albert m a number of important pieces of h furniture, together with several other s of considerable artistic interest. The ıre belongs for the most part to the of the later Stuarts and William and and includes several types hitherto esented in the Museum collections. g them may be specially noted a pair of t chairs of about 1700, covered with idery in silk and wool representing vases ips, carnations, and other flowers, and tools similarly covered; also a single covered in finer embroidery with floral s. Another chair, with a tall back l in openwork and a seat covered with idery, belonging to the period of William ary, is illustrated in Macquoid's " History nglish Furniture." Several interesting are included in the gift. Of these the st may be attributed to the later years seventeenth century. It has legs carved n spirals, and a top decorated in marquetry tted with a panel enclosing a backgammon . This table also is illustrated in ıoid's History. Another table of about ame period as the above is of gilt wood gilt *gesso* top finely ornamented in French such as characterises the period of XIV. A third specimen, a side-table, t wood, in the style of William Kent, is a al example of the massive furniture which ed the great houses of England during eign of George II. These pieces are ited in Rooms 55 and 56 of the Woodwork ies. Other objects are included in the Mr. Green has also lent to the Museum a four valuable chairs of the time of Queen covered with Mortlake tapestry woven ol and silk with designs of flowers.

Sale of Old Furniture.

It is stated that carved Georgian chimney-pieces realised £50 and £39 at the sale of Sir M. FitzGerald's furniture at Severals House, Newmarket, by Messrs. Knight, Frank, & Rutley. A Sheraton writing-table was sold for 15 guineas, a small French commode for 60 guineas, and twelve chairs in the Chippendale style for 25 guineas.

London and Lancashire Fire Insurance Company, Ltd.

The annual Report of the London and Lancashire Fire Insurance Company, Ltd., shows that the net realised profit in the Fire Department was £166,090, in the Accident Department £64,698, and in the Marine Department £44,450—an aggregate of £275,238. The sum of £241,886 is placed to reserve, which has now reached the total of £3,708,229. The total security to policy-holders now amounts to no less than £6,349,479.

Gretna Disaster Memorial.

The Earl of Rosebery, hon. colonel of the regiment, recently unveiled a memorial erected in Leith in honour of the officers, non-commissioned officers, and men of the Leith Battalion, the 7th Royal Scots, who lost their lives in the railway disaster at Gretna a year ago. Nearly £4,000 was subscribed for the memorial, which takes the form of a Celtic cross in grey granite, with mural tablets bearing the names of the fallen.

The Builders' Accident Insurance, Ltd.

At the thirty-fifth ordinary general meeting of this company, held at the Registered Offices on Wednesday, 3rd inst., the directors submitted their annual Report and statement of accounts for the year ending December 31, 1915, from which we take the following:—The premium income during the year has been well maintained, but a falling-off may reasonably be expected when the effect of the war on ordinary building operations has declared itself. The valuation of the investments as at December 31, 1915, shows a depreciation of £1,122 18s. 11d. The funds of the Association, after allowing for the above depreciation, stand at £29,146 11s. 11d., as against £24,884 13s. 3d. at December 31, 1914. In accordance with the articles of association, the following directors retire, and, being eligible, were re-elected:—Messrs. Thomas F. Rider, Woodman Hill, and William Nicholson.

An Empire Memorial.

At the annual meeting of the Royal Colonial Institute a letter was read from the President, Earl Grey, in which he stated that one of his ambitions was that the Institute might one day be housed in a building worthy of the Overseas Empire, of which it was becoming every year more and more representative. Lord Grey added:—" It is a humiliating fact that, notwithstanding that London is the centre of the greatest empire that has ever existed, there is not one conspicuous building which suggests that the Empire consists of anything outside the United Kingdom. After the war is concluded the public opinion of the Empire will require that a memorial in honour of those Britons who have offered their lives in order that the world may retain its liberties shall be erected in the heart of London; and I would respectfully suggest to the members of the Institute that they should use their influence in favour of the proposal that the suggested War Memorial should take the shape of a building and an organisation which shall stimulate a closer inter-Imperial trade, and a more intimate mutual knowledge, sympathy, and affection between the component parts of the Empire. Fortunately, through the liberality of Imperialists in Canada, Australia, New Zealand, and South Africa, as well as in the United Kingdom, the finest undeveloped site in London, namely, that between Kingsway and the Strand, has so far been safeguarded against appropriation by the private builder, and has been kept available for high Imperial purposes. It is my hope that on this site may arise a building in which the Royal Colonial Institute may find more dignified and appropriate habitation than in its present extended but still too limited quarters."

The Royal Scottish Academy.

The nineteenth exhibition of the Royal Scottish Academy is now open in Edinburgh.

The Society of Antiquaries.

At the anniversary meeting of the Society of Antiquaries of London Sir A. J. Evans, F.R.S., was elected President, Mr. W. Minet, Treasurer, Sir E. W. Bradbrook, Director, and Mr. C. R. Peers, Secretary.

Zeppelins and Stained Glass.

An appeal to custodians of buildings containing ancient glass that they should protect it by boarding, or remove it during the time that there may be danger from air raids, is made by Mr. Thackeray Turner, Chairman of the Committee of the Society for the Protection of Ancient Buildings. Mr. Turner is of opinion that the most reasonable thing to do is to have a frame made, about the size of the window, and cover it with ¾-in. rough boarding, giving as much space between the boarding and the glass as possible, in order to allow for concussion

Carved Panel, St. Stephen, Coleman-Street.

Referring to the note on the carved panel, St. Stephen, Coleman-street, E.C., in our last issue, the facts stated are not, we are informed, quite accurate. The panel over the gateway at the church is a replica of the original. The original, however, is not in the Guildhall Museum, as stated, but is kept in the vestry of the church. The reason for its removal was that it showed signs of decay, and it was moved inside and placed under glass for its preservation. This was carried out, and the replica put up over the gateway, the churchwarden then in office generously doing this at his own cost and charges.

Exeter Archæological Society.

At the annual meeting of the Exeter Diocesan Architectural and Archæological Society the annual Report was read. Speaking of the efforts of the Society in regard to the King-street Houst, Exeter, the Report stated that its preservation was ultimately accomplished by the action of the Office of Works, although the Society contributed to that success. They could have nothing but praise for the admirable public spirit shown by the City Council in its treatment of the Priory of St. Nicholas. During the past year further discoveries had been made, including, with some of the actual foundations, it was believed, the site and extent of the Priory Chapel.

The Marseilles-Rhone Canal.

Discussing the Marseilles-Rhone Canal, a Press Association message describes the Rove Tunnel as a triumph of engineering. It is not so much the length of the tunnel, the message states, though it is 4½ miles long, that most impresses the imagination; it is its breadth and its height. It is 72 ft. broad—that is over 26 ft. broader than the Paris Underground—and from the Canal bottom to the summit of the vault its height is 46 ft. There will be 10 ft. of water in the Canal, so from its surface there will be a clear space overhead of 36 ft. It will take three years before the Canal is ready for traffic, but when the work is done Marseilles will join hands with Havre for the first time. The estimated cost of the Canal is £3,600,000.

Mr. F. Bennett, J.P.

The death is announced of Mr. Frederick Bennett, building contractor, formerly of New-street Works, Ipswich. Mr. Bennett was a native of the borough; he was born on April 19, 1846. His father was the proprietor of a building business in St. Clement's, and at the age of seventeen he was drafted into his father's business. Later he became associated with his brother, the late Mr. J. B. Bennett, in the direction of the concern, and many large contracts were carried out. One was the erection of the Ipswich Museum and Free Library, and various adjuncts; others included the Naval Barracks at Shotley, the Waterside Works, shops forming part of the Orwell Works, buildings for the late Duke of Hamilton at Easton, near Wickham Market, and for the late Sir Cuthbert Quilter at Bawdsey Manor. The total number of houses and other buildings erected by the firm approximates to nearly 700.

Leading Contents.

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ILLUSTRATIONS.

Khartoum Cathedral.

THIS church has been designed by Mr. Robert Weir Schultz Weir, whose special knowledge and study of the Byzantine buildings of the nearer East qualified him for undertaking the task. It has already been illustrated in this journal, perspective views of the exterior and interior having been published in our issues for September 11, 1909, and February 2, 1912. The opportunity has now been afforded us of publishing the working drawings and also photographs of the existing building, which we hope may prove of interest to our readers. The architect has supplied us with a description of the building, and this appears on page 371.

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MEETINGS.

FRIDAY, MAY 19.

Institution of Mechanical Engineers (at the Institution of Civil Engineers, Great George-street, S.W.).—General meeting. 6 p.m.

MONDAY, MAY 22.

Royal Society of Arts (Cantor Lecture).—"Vibrations, Waves, and Resonance." By Mr. J. Erskine-Murray, D.Sc., F.R.S.E., M.I.E.E. (Lecture IV.) 4.30 p.m.

WEDNESDAY, MAY 24.

Royal Society of Arts (Ordinary Meeting).—"Zinc: Its Production and Industrial Applications." (Peter Le Neve Foster Prize Essay.) By Mr. John Collett Moulden, A.R.S.M., M.Inst.M.M. 4.30 p.m.

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THE WONDER OF WORK.

Now that the mild excitement occasioned by the expectations of the Architectural Room at the Academy has had a few days in which to evaporate, we may return to the challenge of Mr. Joseph Pennell. We need not repeat our apologies for the lack of any striking effort of imagination there which might have formed an effective reply to him. The reaction is to come, and spiritual expression will have its vent, naturally, in a spiritual period when that recurs.

Yet, in spite of the brutality of Mr. Pennell's onslaught in his article, "My Views of the Wonder of Work," which we are glad to have seen printed, and which we welcomed, we cannot but be grateful to him for steeling our nerves and forcing us to some self-examination. He is in the habit of hitting hard, and this time, though the conventions he assails are deeply entrenched, he gets home in places. In countering such an assault we are forced to the same methods. If the hatchet is to be buried it must be "in the enemy's breast," to quote the master of whom Mr. Pennell is an avowed disciple.

Many of us have followed Mr. Pennell's art from its earliest development. We have observed his restless interest in one phase after another of architectural copy for his journalistic purposes—travelling over the old mediæval centres of Europe, culling the tit-bits of picturesque ruins in the days of the best American magazines and their travel stories. Later, we found him intrigued by the *papier mâché* dreams of the great exhibitions with their romantic groupings and waterways, the colossal structures of New York with their splendid adaptations of European motives to the requirements of the modern concentration of the human machine. Like the great Piranesi, he has arrived at a stage when he finds apparently nothing to record in the world of grace and seeks to find another Carceri series in the mammoth engines of modern engineering and material production, even including the forces of destructive war and German frightfulness. All these latter subjects are legitimate and excellent matter for representation, and are possible, given the artistic veil with which they are screened by a merciful atmosphere, of being transformed into castles of romance and the illusion of mirage. But while we owe thanks to the Whistlers and Pennells of this time for assisting us in the tolerance of enormities, and even helping us to be thankful that we are allowed an existence in the Brobdingnagia of toil, we cannot accept the verdict of the impressionable pictorial artist that the art of architecture as we architects understand it has gone with the past, and that it is left to the engineer to carry on its traditions and its appeal, consciously or unconsciously.

After all, the life of the individual man and woman goes on in much the same proportion as it did hundreds of years ago. One eats and drinks the same quantity, one endures not much more or less, and the spirit that is in us responds to the delicacies of eternal influences.

As communities have always unconsciously formed themselves as a refuge from the terror of the plain, the sea, and the elements, so shall we shrink from the colossal ugliness of modern enterprise, necessities though they may be, the awful uniformity of the great army and the system which necessitates it.

The crash of the orchestra is only tolerable in the balance of the composition.

The mistake Mr. Pennell makes is that architecture does not exist, in the first place, to be exploited by the modern pictorial artist. Those of his craft who roam the world for subjects for their periodical exhibitions are searching continually for the sensational, and by virtue of their public appeal are too apt to constitute themselves arbiters of tastes and critics of the far more subtle art of creation. It is the old question of the executive and creative artist, the virtuoso and the humble composer. The modern etcher, lithographer, and many of the painters, such as Brangwyn, in their exploitation of the building as subject-matter, are, by way of obscuring our vision, vulgarising our taste, and in their flights of imagination drawing us farther from our relation with contemporary life than we ever were in the worst stylistic and revivalist periods. They can have no conception of the processes by which a modern building, of any sort of purpose, is conceived and evolved, of its intimate relation to the scale of the life which it is to shelter, and the material available to the artist entrusted with its execution. The true artist in architecture can express himself with all these limitations, and the last person he will endeavour to appeal to will be the picture-maker in search of melodrama rather than the true poetry of this modern life, such as it is.

Perhaps the real answer to Mr. Pennell is that the average man is less than 6 ft. in height, whether he be English, American, French, or even German; and, in spite of the acceleration of our present life, he is more than half his time in a state of comparative repose. Certainly the amenities of this life, including architecture, its form and disposition and even its accessories, must be governed by this unalterable fact. We may surrender to the suggestion contained within the lines of a frame or proscenium arch, but we cannot emulate them in the scale of life in which we, as architects, have to labour. It is tru the entrance to a great building is the thr of a world with its own atmosphere, whe suggestion of the infinite may be felt, an the human scale be for the moment obs but Mr. Pennell has not touched or perhaps the more important of the arch opportunities. The design of the inte where no engineer can ever follow, h terrifying and forceful he may prove efforts to eclipse the mountains, dam the and outdo Nature herself. The architec is the master with all the resources engineer at his disposal, a subservient to the cunning of the artist mind.

E. A. RICKA

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THE SURVEYORS' INSTITUTI

PROFESSIONAL EXAMINATIONS,

THE following students have been suc in passing the Intermediate Examinati

A. Donn, London
J. E. V. Evans, Llanelly
A. L. Ewens, Lancaster
† A. Fitzsimmons, London
E. A. Hardman, Enfield, Middlesex
D. B. King, London

W. Minifie, Bridgnorth
J. C. Platt, Bar
* N. F. Proctor don
‡ D. Sawbridge,
R. E. Symonds, St. Edmund's.

† Penfold Silver Medal. * Institution
‡ Special Prize.

The following non-students have successful in passing the Intern Examination :—

G. H. Allison, Grimsby
† W. C. Armitage, Shrewsbury
C. N. Astbury, Market Drayton
J. A. Avery, Birmingham
B. C. Britton, Birmingham
E. S. Driver, Chertsey
A. T. Eginton, Preston
E. T. Francis, St. Austell
T. P. Francis, Pontardawe

D. Griffiths, Pon
R. T. Haworth,
A. R. Jones, Lon
E. Living, Lond
J. M. Pilkingto don
S. B. Silvester,
D. T. Tansley, chester
A. W. Varlow mingham
J. C. Wheeler, Molesey
F. Willey, Durh
* J. Wilson, Tru

† Driver Prize. * Beadel Prize.

Irish Candidates.

S. McIlveen, Bangor, Co. Down
‡ W. H. O'Donnell, Rathmines

P. Tubridy, Co. Clare.

‡ Building Prize.

Scottish Candidates.

T. C. Marwick, Edinburgh

P. Mearns, Du line
D. Vallance, Gla

The following candidates have been s ful in passing the Final Examination :-

G. C. Anthony, Hereford
H. G. Baker, Aldershot
T. Barlass, Carmarthen
E. C. Baynham, St. Albans
C. E. Berry, London
R. L. Bland, London
D. A. Burt, Andover
H. R. Crabb, Pembroke Dock
A. B. Crosby, Hanley
W. H. Drover, Southampton
O. Gardner, Worcester
G. D. Goulding, Sunderland
S. J. Gray, Bolton
H. C. Haynes, London
W. Hill, Egremont
E. Hughes, Liverpool

L. W. Jukes, ampton
S. R. Moss, Linc
A. C. Page, Lor
H. C. Pettett, L
W. R. Preston, bridge
A. St. G. Randa tingham
V. Read, Redlan
R. A. Samuel, S
J. Sandow, Salis
*† A. Schofield,
A. E. Smith, Plu
W. D. Smith, Lo
F. L. Thompsor don
A. S. Wallis, Sl
J. E. Whesker, chester.

* Penfold Gold Medal. † Crawter Pr

Irish Candidates.

J. H. Craig, Belfast

P. J. Ward, Bel

Scottish Candidates.

J. Gray, Bonnyrigg
L. Dawson, Chatham

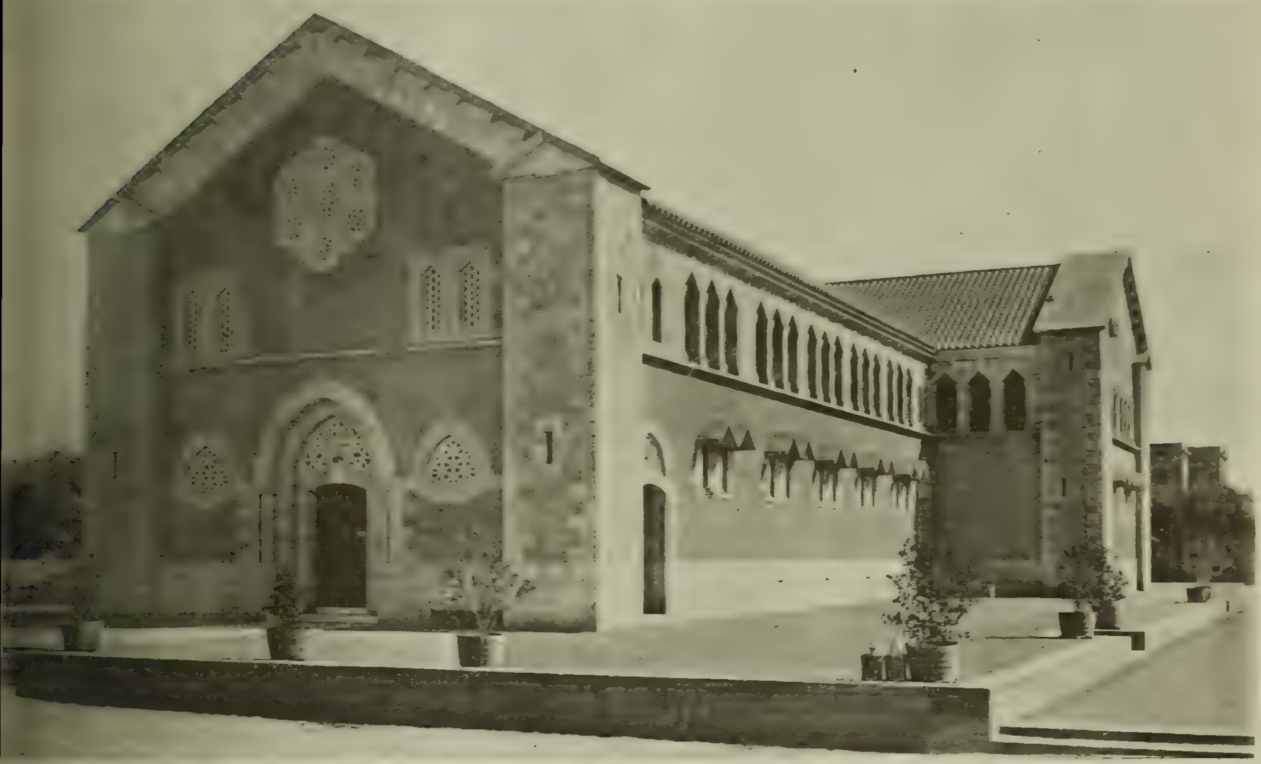
W. Dobson, Glas

The following candidates have successful in passing the Direct Fell Examination :—

J. H. Belfrage, London
H. Bradshaw, Chesterfield
G. M. Dunn, Burgh Heath

W. H. Law, Liv
W. T. Lynam, worth, near B
J. Rennie, Ma Glasgow.

HE CATHEDRAL OF ALL SAINTS, KHARTOUM, SUDAN.



Khartoum Cathedral: View from the West.

Mr. Robert W. S. Weir, Architect.

R some years after the reconquest of the Sudan, Church of England services were held in a large room which had apart in the palace at Khartoum for the ne Anglican community.

vas obviously only a temporary arrange- nd steps were taken to collect funds erection of a permanent church. The ion-stone was laid by H.R.H. Princess (Princess Henry of Battenberg) a visit to Khartoum, but it was some able time after this before a real start was th the erection of the structure itself.

the plans had been prepared and d many difficulties had still to be ne, not the least of which was the ng of an efficient building staff. There y little skilled labour available, and there was no real building tradition in the country. Good building stone existed in one of the isolated hills which stand up in the otherwise flat country; but the quarrying of this stone had hitherto been done in a very primitive manner. This hill, called Gebel Auli, is situated close to the banks of the White Nile, about twenty miles above Khartoum, and the stone was brought down to the city in small quantities and sizes by the native river boats.

It was essential for the proper carrying out of the work to secure the services of a fully-trained mason, who also had some experience in quarrying as well as in the organisation and direction of practical stone-dressing and building of good character. The Committee was fortunate in securing the services of Mr. John Latimer, a Scottish mason of considerable experience in both, who went out to Khartoum and undertook the complete charge of the works, both quarrying and building.

His task was an uphill one at the beginning, as not only had he to initiate proper quarrying methods, but he had also to train such craftsmen as were available, principally Italian and Greek masons who had found their way to the Sudan.

The unskilled labour was almost entirely undertaken by natives, both male and female, the women acting as bearers, carrying the soil out of the trenches on their heads in small baskets, and, later on, bringing up the mortar and the bricks for the vaulting as well as other materials to the men who were doing the building.

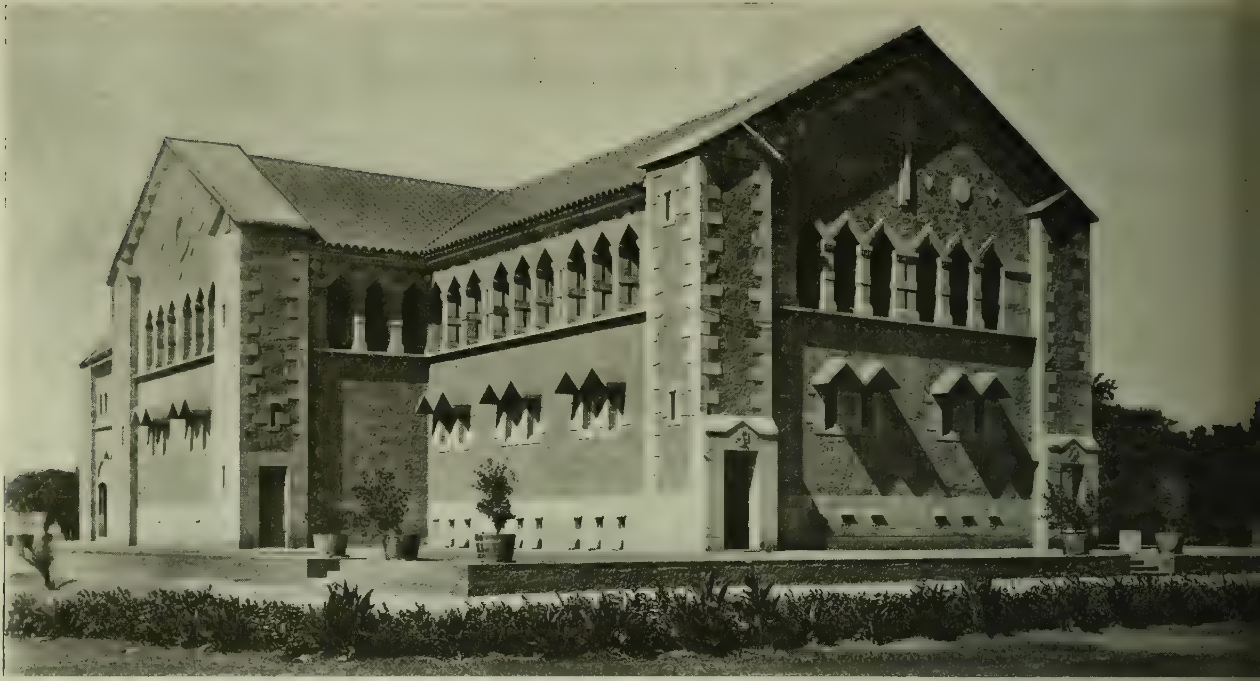
As timber was scarce and expensive, it had to be used sparingly; elaborate scaffolding and centering were therefore out of the question. No cranes were available, and all the material had to be carried up long sloping gangways to the various levels. One "centre" was used for all the main arches, which were built one at a time.

Work carried on under such conditions would necessarily be slow, and it took a number of years therefore to construct a building which in this country could have been carried out in eighteen months or two years. This was rather an advantage for many reasons—the supply of labour was limited, the money came in slowly, and the building went up very gradually and did not overtax the foundations by bringing an undue pressure of heavy weight all at once on a very precarious subsoil.

The nature of this subsoil was unusual. It consisted of sand, dry for some months, while the Nile water level was low, but impregnated with water which found its way in when the rivers were in flood.

The heavy cost both in material and labour rendered such a scheme as the construction of a large concrete raft over the whole area of the site impracticable; and recourse was had to a rim of concrete all round under the walls, and these were so constructed (see sections) as to

The Vault before the Outer Covering was put on.



Khartoum Cathedral : View from the East.

Mr. Robert W. S. Weir, Architect.

spread the weight equally all along this rim. The adoption of this scheme has been justified in the result, as the structure is absolutely sound, no cracks having developed anywhere. As a precaution, however, iron tie-rods were inserted just above the springing of the main arches, but these can and will be removed in due course.

The sandstone used in the building is of two colours, yellow and a pale red, and these have been used in contrast in the main arches and elsewhere with very good effect.

The limitations of the so-called skilled labour influenced the design of the building considerably. For instance, the window-heads were made of two stones sloping to an apex, as being simpler to fit and build than small arches ; plain splays and simple cuttings were adopted generally, and mouldings were almost entirely eschewed. The superstructure was started at the east end and gradually worked westwards, and by the time the west end was reached sufficient experience had been gained to warrant the introduction of some slight elaboration of the details in parts.

The nature of the climate also considerably influenced the design. The tropical sunlight had to be kept as far as possible from striking on the windows directly. This result was effected as regards the lower windows by using widely-projecting stone hoods, and the upper windows have been set back behind an external gallery, which also acts as a simple means of getting direct access to these windows for the purposes of opening and shutting, cleaning, etc. Here also can be hung on the inner face of the outer gallery openings mats or blinds, which can be kept wetted in order to cool the air before it passes into the interior of the church.

Being situated in the tropics, the building gets the sun on either side at one time or another of the year, so that precaution had to be taken all round. As sandstorms also come up, at one season from the north and at another from the south, entrances had to be arranged on both north and south sides for general use, so that easy access can be got at all times with the minimum of risk of the sand blowing in.

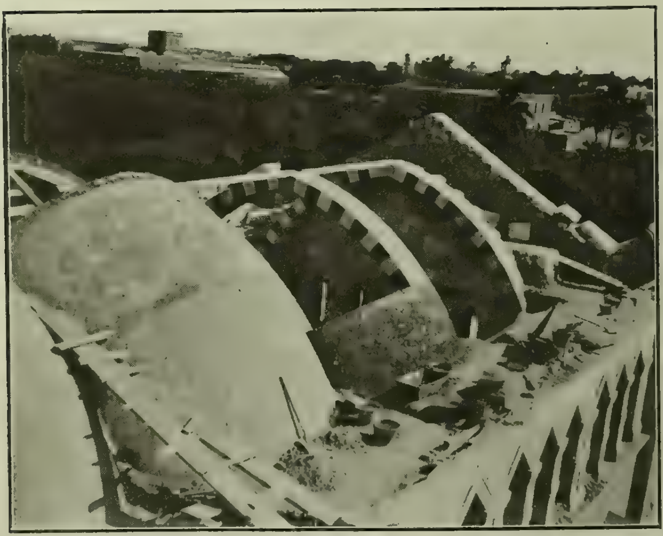
The west doorway is used when the climatic conditions allow, as in the cooler weather and also on occasions of State or special ceremonial. Similar conditions necessitated the raising of the building on a terrace and the placing of the main floor level about 4 ft. above this.

The roof also had to be constructed for coolness, with a sealed air-space the inner vaults and the outer coverin latter was formed of reinforced concre made as thin as practicable so as to kee the weight to a minimum. On these "Roman" tiles which form the outer were laid in such a way as to give a fur space between them and the slabs.

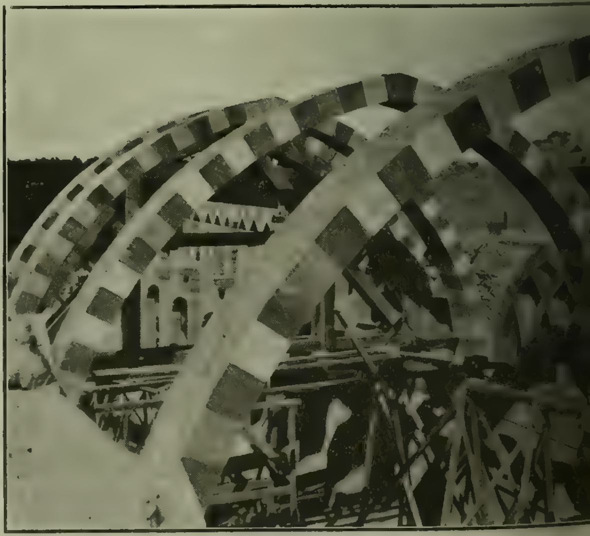
A projecting wall-head course w essential, with the tiles laid projecting same sufficiently far to throw the w clear of the walls—as in the Sudan, as from Egypt, heavy rainfall at a certain of the year has to be taken into consid

With the exception of the vaulting, th structure is entirely constructed of The vaults are formed of rough local and were built without centering, a traditional manner of Byzantine build

It was found possible to introduce amount of simple pattern piercing and as in the pierced stone slabs of the of the west façade, and over the three doorways, and in the capitals of the a stonemason having been found on capable of executing these from careful d and models. He also cut the de



The Vaulting in Progress.

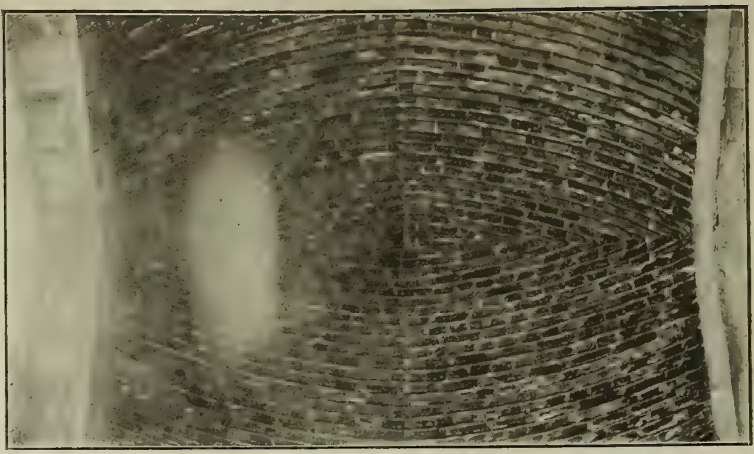


The Main Arches.

on the stone front of the western
ch reads as follows :—

AM · ET · IN · MEMORIAM · OMNIUM · SANCTORUM.

me the building was in progress no
al school of joinery was available
with the doors and the internal
ese therefore had to be prepared in
l sent out ready for fixing.
lesign and construction of these
nditions had to be carefully con-
allowed for; simple forms were
being more suitable and less likely
uble afterwards, hence the rather
ype of the chancel screen, where
acery would have fallen to pieces
hort time. Even the church chairs
ecially arranged to suit the climate.
dow-frames were also made in
ey were constructed of strong steel
l are glazed with thick "bottle"
green hue specially chosen for the
tempering the strong sunlight.
es are hung on pins pivotwise at
ottom, thus giving the maximum
opening area and allowing for full
e cool night breezes through the
They are kept tightly closed during
The pierced stone windows of the
e fixtures, and the green "bottle"
ed directly into the stone.
n was constructed of a direct and
n by Messrs. Walker, of London,
being made easily accessible for
d adjusting.
s and the chancel screen were made
nd the stalls, etc., of unpolished
ogany, and so far, owing to the care
eir construction, they have stood
limate very well.
ric lighting was originally schemed
e arrangement of single lamps,
rows of five across the church and
in height, under each main arch.
onsidered by the Committee, after
scheme, that grouped lights would
suitable, the arrangement was
altered and is now as represented
shed photographs.
r cross, candlesticks, and other
re designed by the architect and
London. The doors and chancel
re made at Sapperton under the
Mr. Gimson and in his workshops.
er Smith, of Balcombe-street,



Apex of Completed Vault from Inside.

Marylebone, was responsible for the construction of the steel casements and for the glazing of same. Messrs. Ames & Hunter, of London, supplied the roofing tiles, which were made in Essex.

Stained glass has been inserted in the seven small windows of the east wall. This was designed and executed by Miss Mabel Esplin, of Hampstead. A complete ikonographic scheme has been arranged by the architect for the windows in the north and south transepts, and several have already been carried out by the same artist. The other windows in the church will remain glazed with the cool green glass already mentioned.

The building is now practically finished, with the exception of the tower. The plans and details for this are complete, and its construction would have been started before now but for the war. It is to be hoped that, later on, funds may be available for erecting this and so entirely completing the design.

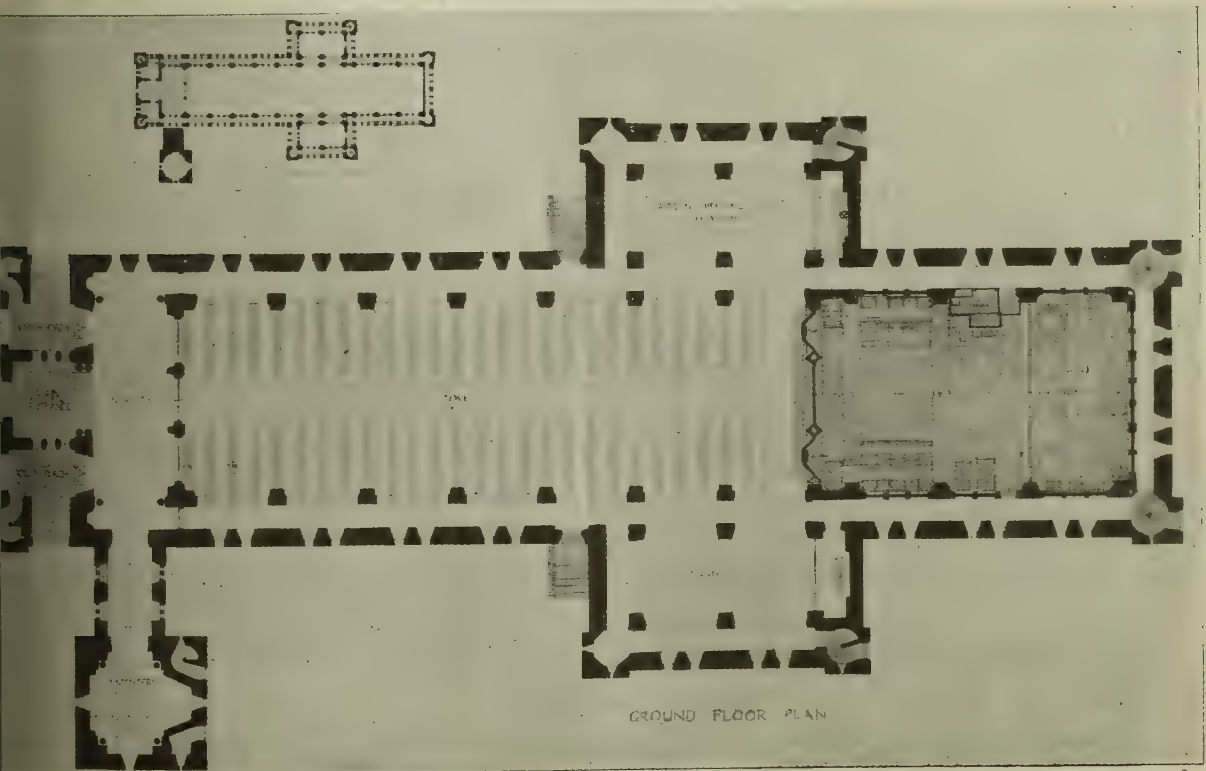
The architect was able to keep in touch with the progress of the work by means of photographs taken and sent home at frequent intervals. A general oversight was exercised on the spot, first by Captain Done, R.E., Director of Military Works in the Sudan, afterwards by Mr. W. H. MacLean, C.E., Professor of Engineering at the Gordon College in Khartoum, and, on the latter's transference to Cairo, by members of the Works Department of Khartoum.

Mention should be made of a scheme which has been drawn up and adopted for the grouping and regulation of memorial tablets in the church. Spaces have been set apart on the walls of the north and south transepts for the erection of these according to a definite plan, and some have already been executed and placed in position, those in the north transept being in memory of men who died in the rebellion in which Gordon lost his life and in the various expeditions for the relief or reconquest of Khartoum, and the ones in the south transept of others connected with the Sudan who have given their lives since then in the service of the country.

The north transept is dedicated to the memory of General Gordon, and on the west wall of this chapel is an inscription in large bronze letters fixed to the stonework of the wall, which reads as follows :—

PRAISE · GOD · FOR
CHARLES · GEORGE · GORDON
A · SERVANT · OF · JESUS · CHRIST
WHOSE · LABOUR · WAS · NOT · IN · VAIN
IN · THE · LORD

(R. W. S. W.)



Khartoum Cathedral: Plan.
Mr. Robert W. S. Weir, Architect.

THE BUILDING TRADE.

THE NORTHERN COUNTIES FEDERATION OF BUILDING TRADES EMPLOYERS.

We take the following from the annual Report for 1915 :—

State of Trade.

The war has to a very great extent prevented the realisation of any prospect there was for any improvement in the building trade since the presentation of the last Report. Unemployment among the operatives in the trade is light, but this is due to the large number of workmen who are working on munitions and Government work or have joined the colours. The continual rise in the price of materials has had a great effect in restricting the progress of general work, and in many cases contracts have been suspended and work actually in hand abandoned for the present. The action taken by the Local Government Board in withholding from local authorities sanction to obtain loans for building purposes, except in necessitous cases, has also acted detrimentally upon the trade. Any improvement cannot be expected this side of the satisfactory termination of the war and the restoration of normal conditions.

Apprentices.

The consideration of this question has occupied a large amount of thought and time, with the result that a new scale of wages has been drawn up and adopted with the object of inducing boys to come into the trade.

Scale of Wages Payable to Lads on Entering as Apprentices in the Building Trade as Joiners or Bricklayers.

First Scale.

Age Starting Between		Weekly Wage. s.	d.	
14-15	years at 1½d. per hour if a week of 50 hours worked	6	3	for 1st year
15-16	„ 2d. „ „ „	8	4	„ 2nd „
16-17	„ 2½d. „ „ „	10	3	„ 3rd „
17-18	„ 3d. „ „ „	12	6	„ 4th „
18-19	„ 3½d. „ „ „	14	7	„ 5th „
19-20	„ 4d. „ „ „	16	8	„ 6th „
20-21	„ 4½d. „ „ „	18	9	„ 7th „

Second Scale.

Age Starting Between		Weekly Wage. s.	d.	
15-16	years at 1¾d. per hour if a week of 50 hours worked	7	3½	for 1st year
16-17	„ 2½d. „ „ „	10	3	„ 2nd „
17-18	„ 3d. „ „ „	12	6	„ 3rd „
18-19	„ 3½d. „ „ „	14	7	„ 4th „
19-20	„ 4d. „ „ „	16	8	„ 5th „
20-21	„ 4½d. „ „ „	18	9	„ 6th ,

The weekly pay to be the same winter and summer.

Contract Matters.

Difficulties, as a result of the war, have arisen in carrying out many contracts, which have added very seriously to the cost of both pre-war contract work and work taken since the war. The executive and its officers have afforded advice from time to time to its members and have assisted them in their negotiations with their building owners and employers. Many cases have come to the notice of the Federation where members have submitted to losses which might have been avoided if members had protected themselves by the use of a fair form of contract or had better understood the provisions for their benefit included in their contracts. Arrangements have now been made whereby members as a benefit of their membership are now assured assistance in fixing up their contracts, and also in the preliminary stages of any difficulties of legal advice without additional charge beyond their ordinary subscription. Time and consideration have been given to other matters in the interests of members of the Federation, though the references above record the main work of the past year.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberystwyth.—The T.C. has passed plans of alterations and additions at the back of Derwen House, Thespian-street, submitted by Mrs. Evans.

Aldershot.—The U.D.C. has approved plans for additions to offices, Albert-road, for Messrs. R. Simmonds & Sons, and additions to building in York-road for Capt. Brown.

Argyll.—The Scottish Land Court has empowered the Board of Agriculture for Scotland to constitute two new holdings on the farm of Kilbride and Stronduich, in the parish of Kilfinan.

Boston.—Plans for extension of a packing-room at a warehouse in Tawney-street proposed to be made by Messrs. J. & J. Beaulah, for additions to the dressing-rooms at the Scala Theatre Company, Ltd., and for a washhouse on the Tattersall-road, proposed to be erected by Mr. J. Wise, were allowed by the T.C.

Bournemouth.—The B.C. has approved the following plans:—Extra lavatory accommodation, Queen's Park Hotel, Holdenhurst-road, Messrs. Strong & Co., Ltd.; additions, 83, Hankinson-road, Mr. G. Harding; amended plan, house, plot 221, Dunbar-road, Mr. H. Long; four maisonnettes, plots 119-122, Green-road, Mr. A. Barnes; house, plot 123, Keswick-road, Rev. K. S. Radcliffe; bakery, etc., corner Cleveland and Spring roads, the Parkstone and Bournemouth Co-operative Society, Ltd.

Bristol.—The Libraries Committee has a proposal for selling a bit of land so that a street may be widened to allow the W. D. and H. O. Wills branch of the Imperial Tobacco Company to extend their factory premises.

Burnham (Somerset).—The U.D.C. has passed a plan for a new garage in Regent-street, for Mr. W. H. Horril.

Burryport.—Plans for a new cinema have been referred to the Plans Committee.

Cardiff.—At a recent meeting of the Board of Management of the King Edward VII. Hospital, Cardiff, the scheme for extending the massage and electrical sections of the proposed new Orthopædic Department was made known, and it was announced that the plans had been approved. The Board referred the scheme to the Building Committee with power to accept tenders. The L.G.B. has held an inquiry into the proposal of the Corporation to construct a sewer from Borstal-avenue, Heath, to Fairoak-road, Roath Park, through the cemetery, in order to drain the cemetery and the newly-built-upon area on the Heath estate, for which a loan of £3,500 is required.

Dewsbury.—The following plans ha
approved by the T.C.:—Messrs. Wilma
additions to Meadow Mills; executor
Thos. Hanson, raising shed, Queen-stre
Ravensthorpe; Messrs. J. H. Walker
additions to offices, Ravensthorpe Mil
Hall Spinning Company, staircase tow
Hall Mills; Mr. Joe Haley, motor garage
road; Lord Savile, extension of Warr
Savile Town, also widening of Brett
Savile Town; Mr. D. H. Lumb, exte
motor garage, Crawshaw-street, Raven
Dr. Beattie, additions to coach-house,
hyrst.

Eastbourne.—The T.C. has approved t
ing plans:—Mr. H. H. Coles (Mr. F.
architect), internal alterations, 28, Hyde
Guardians of the Poor (Mr. F. G. Cool
tect), internal alterations, 1, Harti
Messrs. Thornton & Hunt (Mr. F. G
architect), addition to Hill Brow, Bolso
Guardians of the Poor (Mr. F. G. Cool
tect), addition to Cottage Home, Dac
Mr. F. E. Rayner (Mr. Stephen Fox,
Mr. F. E. Rayner, builder), addition t
Lodge, Devonshire-place; Mr. J. D.
(Mr. Andrew Ford, architect, Mr. J. D
son, builder), two houses, The Rotu
Anthony's Hill; Mr. O. Edmunds (Mr
Ford, architect, Messrs. G. Bainbridg
builders), internal alterations to K
Court; Mostyn Hotel Company (Mr.
Ford, architect), addition, Mostyn Hote
Hotel Company (Mr. P. D. Stonham,
addition, Mostyn Hotel.

Hendon.—Plans passed by the D.C.:
rear of factory, Renters-avenue, Mess
sons; alterations to clubhouse, Military
Willifield-green, Hamptead Tenants, L
additions, 51, Church-road, Mr. P.
revised plans of offices, etc., corner
avenue, The Hyde, Integral Propeller
Ltd.; five houses, Hillcrest-avenue, M
Massey & Co.; six houses, Brentmead-
A. J. Thompson.

Henley-on-Thames.—A new vestry is t
at the parish church.

Hexham.—The R.D.C. has approved
alterations to premises at Pearson's-ter
mitted by Mr. J. E. Hamilton, for M
Gloag; and plans of additions and alte
the cottages at the Hall Farm, Stock
Lord Allendale, and additions and alt
Slaley Cottage, Slaley, for Mr. S. Ca
Glen, Slaley.

London.—The Metropolitan Water
given instructions for tenders to be i
carrying out the necessary works of cle
painting at the Central Offices, Sa
W.C. A widening is to be made
corner of Brompton-road and Cromwel
a cost of about £1,000. An appeal is b
for funds to carry out an extension to
Jack Club for Sailors, Soldiers, and
situated in Waterloo-road, S.E.

Mortlake.—The Vicar of Mortlake ha
the gift of a site for a church on the
Estate.

Ruislip-Northwood.—The U.D.C. has
a list of roads and paths to be tarred t
the district.

Sunderland.—The Markets and Baths
tee recommends that the requisite repa
roof of the Hallgarth-square baths a
houses be executed by the Borough En

Swanage.—The U.D.C. has passed a
brick-built shed at the rear of Princess
Mr. J. Hunt.

Swansea.—Negotiations are being car
Swansea with a view to establishin
works for the treatment of ores.

Swindon.—Plans approved by the
Messrs. Groves & Sons, garage, Queen'

Wantage.—At a recent meeting of t
a petition from the inhabitants of De
asking the Council to construct a raise
on either side of the approach to D
Brook Bridge, was referred to a com
consider and report.

Wells.—At a recent meeting of
Council plans were submitted by Messrs
& Palmer on behalf of Mr. James Ga
the erection of a house and premise
site of No. 4, New-street. The Main R
Committee has decided to authorise t
tarring of a length of 6,471 yds. of mai
a sum of £230.

West Hartlepool.—Plans approved
T.C.:—Mr. L. Robson, alteration to
Stockton and Ward-street; Expanded M
pany, Ltd., canteen for female employe

Willington.—The U.D.C. has appro
for proposed alterations to house at
ington, by Lord Boyne.

Workington.—The T.C. has approve
the extension to the offices of the W
Iron and Steel Company.

Yiewsley.—The U.D.C. has asked Mes
Smith & Co. to carry out the tar sprayi
the present month, and has also ag
granite chippings be obtained for rep
roads, where required, before being ta
that 100 tons of granite be obtained
pleting the repair of Falling-lane.

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* See also our list of Competitions, Contracts, etc., on page 376.

IE LONDON COUNTY COUNCIL.

first meeting of the London County
after the Easter recess was held on
in the County Hall, Spring-gardens,
r. A. F. Buxton, Chairman, presiding.

.—Sanction was given to the borrowing
Hampstead Borough Council and the
rsmith Borough Council of £3,000 each
ricity purposes.

ich Ferry—Repairs to Fall Bridge.—
ghways Committee reported that it is
y to execute certain repairs to the
of one of the fall bridges at Woolwich
and they recommended that tenders
supply of the girders should be invited
ected firms.

d List of Contractors.—The Education
tee have made additions to the list of
ors to be invited to tender for work at
ouncil's educational institutions, as
—*Heating Work*—Messrs. Young, Austin,
g, 31, Old Queen-street, Westminster,
cester; Messrs. Colley, Meikle, & Co.,
non-place, Southampton-row. *Minor
Cleaning and Painting*—H. J. Edgar,
n-terrace, Lancaster Gate.

of Works.—It was reported that the
on Committee have authorised the
nent of clerks of works in the archi-
epartment during the three months
June 30, 1916, at a cost not exceeding
6d. a week, to supervise school building
volving expenditure on capital account.
nmittee have sanctioned paid overtime,
necessary.

's and William Atkinson's Scholarships.
Education Committee have invited
s. Sims, R.A., and Professor Selwyn
M.A., Slade Professor of Art at the
ity of Oxford, to act as the judges in
petition for the Queen's and William
n's scholarships to be held on May 22

County Hall.—The Council have made
nents for a small portion of the raft
ion behind the works included in the
for the river wall extension to be carried
Messrs. Morrison & Mason, Ltd., the
ors for that work, as an extra on their
. The cost of this work is estimated

ng Works.—The General Purposes
tee have arranged for the extension
riod of one year from March 31, 1916,
contract with Messrs. John Mowlem &
d., for the execution of engineering
works, and of the contracts with Messrs.
& Hill, Ltd., for the pulling down,
g, and securing of dangerous and
d structures, and hoarding and shoring
nder the supervision of the valuer.

*tions at Existing Places of Public
nment.*—The Theatres and Music Halls
tee have approved the arrangements
d with respect to the undermentioned
s:—105-7, Charing Cross-road—rein-
nt of cinematograph hall; Coronet
Notting Hill-gate—adaptation of a
t rear of balcony as a cinematograph
e and rewinding room; 17 and 19,
lane—electrical arrangements; Drury-
Theatre—erection of cinematograph
e in the pit; Empire Theatre of Varieties
on of new cinematograph enclosure;
Palace of Varieties—provision of new
g room; Grand Theatre, Fulham—
ement of stalls seating; 17-19, Great
l-street—provision of new exit from the
e to the street—provision of new
g room—alterations and additions to
and ventilation arrangements; 33,
eet, Clapham—rearrangement of exit
c.; 120, Jamaica-road—rearrangement
ng; London Hippodrome—construction
floors of additional dressing-rooms;
Palladium—provision of additional
rooms; Maison Lyons, 362-6, Oxford-
lteration in arrangement of main stair-
St. Martin's Theatre, West-street—
nent of automatic sprinklers and
pipes, and of roof and grid over
ge; South London Music Hall—
n of lavatory accommodation for
11, Uxbridge-road—installation of
exhaust fan.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	10	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¼	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	10¼	8½	8½	8½
Bishop Auckland	9	9	9	9½	10‡	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	9½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10	10	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	11	11	10½	9	9½	10	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8½	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	11	11	10½	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	10	10	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9½	9½	9½	9	8	6¼	6¼	7½
Dudley	8½	10	10	8½	8½	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8½	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10½	10½	10‡	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10½	10	10	10	10	10	9	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10½	10½	10	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10½	10½	10‡	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	10½	10	8½	8½	9
Oldham	10½	11	10½	10	9	10	9½	7	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8	6½*	6½*	6½*
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	9½	8½	7½	7	7	7
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7½
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10½	10	9½	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10½	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10½	10½	10‡	10½	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	11	10‡	9½	9½	7½	7½	7½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	10	9½	9½	9½	8½	10	8½	7½	7½	7½
Warrington	8¾	10½	10½	10½	8½	10½	9½	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10½	11	10	10	9½	10½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	7½	6½	6½	6½
York	9¾	9¾	9	9½	9½	9	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 2s. 6d. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) a** **advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, —; Auction Sales, xxii. Certa conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bi themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be ma for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willi to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while eve endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

May 20.—**Rotherham.**—Painting, etc.—For certain painting at the Vestry Offices, Moorgate-street, Rotherham, for the B.G. Specifications, etc., of Mr. W. C. Harrison, Clerk, Union Offices, Moorgate-street, Rotherham.

May 22. — **Ballymore-Eustace.** — Reconstruction, etc.—For the reconstruction and repairs to the country house known as "The Seasons," near Ballymore-Eustace, Co. Kildare. Plans, etc., by Mr. R. H. Hall, A.M.Inst.C.E.I., Architect, Town Hall, Naas, can be seen at the following offices:—Messrs. White & White, solicitors, 13, Ormond-quay, Dublin; Mr. E. J. de Burgh, Loggadowden, Ballymore-Eustace, Co. Kildare; Mr. R. H. Hall, A.M.Inst.C.E.I., Dublin-road and Town Hall, Naas.

May 22.—**Carlow.**—Repairs, etc.—For carrying out extensive repairs and additions to the Council Chamber, the Courthouse, Carlow, for the C.C. Mr. Richard Keogh, Secretary to the Council.

May 23.—**Manchester.**—Boundary Wall, etc.—For the erection of new boundary wall and gates at St. Mary's Home, Dickenson-road, Rusholme, for the Manchester Corporation. Plans, etc., at the City Surveyor's Office, Town Hall, Manchester.

May 24.—**Mytholmroyd.**—Formation of Site.—The Directors of the Lancashire and Yorkshire Railway invite tenders for the formation of site for marshalling sidings and construction of offices, etc., at Mytholmroyd. Plans, etc., at the Engineer's Office, Hunt's Bank, Manchester.

May 24.—**Tubber (Co. Westmeath).**—Reroofing, etc.—For reroofing and renovating Kilmanaghan Church, Tubber, Co. Westmeath, for the Very Rev. J. L. Magee, P.P. Drawings, etc., can be inspected at the office of Mr. T. J. Cullen, M.R.I.A.I., architect, Suffolk-street, Dublin, or at the Parochial House, Tubber. Quantities by Messrs. Morris & Kavanagh, Quantity Surveyors, 68, Harcourt-street, Dublin.

May 25.—**Yeovil.**—Houses.—For the erection of twenty-five houses for factory workers at Westland, in the parish of Yeovil Without, together with certain drainage and other work, for the R.D.C. Plans, etc., of the architects, Messrs. Petter & Warren, Church-street, Yeovil. Deposit, £1 1s.

May 29. — **Ballyhaise.** — Reconstruction of Mills.—For the reconstruction of corn and flour mills at Ballyhaise, for the Cavan Central Creameries and Agricultural Society, Ltd. Plans, etc., by the Society's Architect, Mr. P. J. Brady, J.P., Broomfield House, Ballyhaise.

May 29.—**Shrewsbury.**—Painting, etc.—For painting and decorating:—(1) Quarry Lodge and ladies' lavatory; (2) exterior of Claremont-buildings (part); (3) exterior of Julian Friars'-cottages. Specifications, etc., of Mr. A. W. Ward, A.M.Inst.C.E., Borough Surveyor, The Square, Shrewsbury.

May 30.—**Kilmarnock.**—Painting.—The Gas Committee of the Kilmarnock Corporation invites tenders for the painting of the gasholders, etc., at Riverbank and Langlands-street. Schedules on application to the Gas Offices at Riverbank Gas Works. Deposit, £1.

* June 5.—**Milnsbridge.**—Alterations.—The Commissioners of H.M. Works, etc., invite tenders for adaptation of the Liberal Club for the purpose of a telephone exchange.

June 5.—**Rotherham.**—Painting.—For the painting, whitewashing, etc., of certain elementary schools in the borough, for the E.C. Specifications, etc., of Mr. J. Platts, High-street, Rotherham.

No Date.—**Grossgar.**—Residence.—For the erection of a teacher's residence at Kilmore, Grossgar. Plans, etc., of the architect, Mr. Jas. Scott, B.E., 31, Ocean-buidlings, Belfast.

FURNITURE, MATERIALS, etc.

May 19.—**London.**—Tables.—Supply to the Commissioners of H.M. Works, etc., of tables. Forms of tender, etc., of the Controller of Supplies, H.M. Office of Works, King Charles-street, Westminster, S.W.

May 22.—**Macclesfield.**—Furniture, etc.—Supply to the B.G. of furniture, etc. Form of tender of Mr. Frank Harrison, Assistant Clerk, the Union Offices, Macclesfield.

May 22.—**Newcastle-on-Tyne.**—Materials.—Supply to the Tyne Improvement Commissioners of builders' materials for six months and for twelve months respectively. Forms of tender, etc., of Mr. J. McDonald Manson, General Manager and Secretary, Tyne Improvement Commission Offices, Bewick-street, Newcastle-upon-Tyne.

May 31.—**Liverpool.**—Materials.—Supply to the Directors of the Liverpool Overhead Railway of builders' materials during the twelve months ending June 30, 1917. Forms of tender on application to 31, James-street, Liverpool. Mr. E. J. Neachell, General Manager.

No Date.—**Trimdon.**—Timber.—Supply to the Trimdon Coal Company, Ltd., of timber, oils and grease, iron, firebricks, etc., for six months. Forms of tender of Mr. I. Penney, Deaf Hill Colliery, Trimdon Grange, S.O.

ENGINEERING, IRON, AND STEEL.

May 22. — **Ballymore-Eustace.**— Well.—For sinking a well in the grounds of the house known as "The Seasons," near Ballymore-Eustace. Specification by Mr. R. H. Hall, A.M.Inst.C.E., can be seen at the following offices:—Messrs. White & White, solicitors, 13, Ormond-quay, Dublin; Mr. E. J. de Burgh, Loggadowden, Ballymore-Eustace, Co. Kildare; Mr. R. H. Hall, A.M.Inst.C.E.I., Dublin-road and Town Hall, Naas.

May 26.—**Salisbury.**—Pumping Machinery.—The T.C. invites tenders for the supply and erection of gas engines with suction gas producers and a deep-well pump, etc., at their Chief Pumping Station, Wyndham-road, Salisbury. Drawing, etc., from Mr. W. J. Goodwin, A.M.Inst.C.E., City Engineer and Surveyor, Municipal Offices, Salisbury. Deposit, £2 2s.

May 31.—**Hythe.**—Bastions to Sea Wall, etc.—For the construction of six bastions, one flight of steps, four additional timber groynes, and extension of one existing groyne to the foreshore at Hythe, Kent. Drawings, etc., may be inspected at the Town Clerk's Office, Hythe, or at the office of the Consulting Engineers, Messrs. Douglass, Lewis, & Douglass, 15, Victoria-street, Westminster, S.W.

ROAD, SANITARY, AND WATER WORKS.

May 19.—**Guildford.**—Granite.—Supply to the R.D.C. of granite during the year ending March 31, 1917. Forms of tender, etc., of the Surveyor, Mr. John Anstee, C.E., Council's Offices, Commercial-road, Guildford.

May 21.—**Felling.**—Materials.—Supply U.D.C. of road materials for six months December 31, 1916. Tender forms from t veyor, Council Buildings, Felling-on-Tyn

May 22.—**Ely.**—Granite.—Supply to the of broken granite. Mr. Geo. Martin Solicitor and Clerk, Market-square, Ely.

May 22.—**Fareham.**—Granite, etc.—Su the R.D.C. of granite, basalt, or othe stone, required for the year ending Ma 1917. Form of tender from Mr. J. F. V Surveyor, 16, Southampton-road, Fa Hants.

May 22.—**Monmouth.**—Materials, etc.— to the Monmouthshire C.C. of materials hauling stone for the repair of the mair for the year ending March 31, 1917. Par from the County Council Offices, Newpo William Tanner, County Surveyor.

May 23.—**Burgess Hill.**—Granite.—Su the U.D.C. of granite. Tender forms fr Surveyor of the Council, Burgess Hill, S

May 30.—**Rochester.**—Repair of Sea For the repair of the sea wall at Motl Farm in Bartlett and Otterham Creeks River Medway, for the Rochester and C Joint Sewerage Board. Plan, etc., William Banks, A.M.Inst.C.E., Gr Rochester.

June 2.—**Cannock.**—Pipe Sewers.—F provision, laying, and jointing of about of 9-in. diameter stoneware pipe sewers, the U.D.C. Drawings, etc., of Mr. Blanchard, Engineer and Surveyor, Offices, Cannock, Staffs. Deposit, £2.

June 5.—**Winsford.**—Stone.—Supply U.D.C. of stone for roads during the ending March 31, 1917. Forms of tend Mr. James Wilkinson, Surveyor, Winsfor

Auction Sale.

* May 30.—**Ware.**—Messrs. Morris and will sell by auction, on the premises, maker's machinery and plant.

◆

TO CORRESPONDENTS.

NOTE.—All communications with respect t and artistic matters should be addressed t EDITOR" (and not to any person by name relating to advertisements and other exclusivel matters should be addressed to THE BUILDE and *not* to the Editor.

All communications must be authenticated name and address of the sender, whether for pu or not. No notice can be taken of an communications.

The responsibility of signed articles, lett papers read at meetings rests, of course, with the

We cannot undertake to return rejected co tions; and the Editor cannot be responsible for photographs, manuscripts, or other document models or samples sent to or left at this offi he has specially asked for them.

All drawings sent to or left at this office for c tion should bear the owner's name and ad either the face or back of the drawing. D inconvenience may result from inattention to

Any commission to a contributor to write a or to execute or lend a drawing for publication subject to the approval of the article or drawi received, by the Editor, who retains the right it if unsatisfactory. The receipt by the aut proof of an article in type does not necessarily acceptance.

N.B.—Illustrations of the First Premiated any important architectural competition will accepted for publication by the Editor, whe have been formally asked for or not.

[Those with an asterisk (*) are advertised in this issue.]

CES CURRENT OF MATERIALS.

ng to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

e our last issue oils and turps and white lead have duced.—ED.

r aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest est. Quality and quantity obviously affect prices t which should be remembered by those who se of this information.

BRICKS, &c.

r 1000 Alongside, in River Thames.	£	s.	d.
tocks	2	0	0
Stocks for Facings	2	12	0

1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
ns	1	10	0	Best Blue Pressed Staffordshire ..	5	0	0
Fareham	3	12	0	Do. Bullnose ..	5	5	0
ed Pressed bon Facing	5	5	0	Best Stourbridge Fire Bricks ..	4	15	0
D BRICKS—							
White,				D'ble Str'tch'rs	18	17	6
y, and				Double Headers	15	17	6
Glazed tchers	13	7	6	One Side and two Ends	19	17	6
rs	12	17	6	Two Sides and one End	20	17	6
, Bullnose 4½ in. s	16	17	6	Splays and Squints	18	7	6

Second Quality £1 per 1,000 less than best.

	s.	d.	
s Ballast	8	3	per yard, delivered.
s and Pit Sand	8	6	,, ,, ,,
Vashed Sand	9	6	,, ,, ,,

Per ton, delivered.

	£	s.	d.	£	s.	d.
ortland Cement	2	5	0	2	8	0

£2 1s. alongside in 80-ton lots.
rete 2s. 6d. per ton extra on above.
round Blue Lias Lime .. 1 5 6 at rly. depôt.
—The cement or lime is exclusive of the ordinary charge for sacks.
Stone Lime .... 18s. 0d. per yard delivered.
ridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
STONE—delivered in railway trucks at tbourne Park, Paddington, G.W.R., or th Lambeth, G.W.R., per ft. cube	1	7
. delivered in railway trucks at Nine Elms, S.W.R., per ft. cube	1	8¾
. delivered on road waggons, at Nine Elms ôt	1	9¼
AND STONE—		
wn Whitbed, in random blocks of 20 ft. verage, delivered in railway trucks at Vestbourne Park, G.W.R., South Lambeth, .W.R., or Nine Elms, or L. & S.W.R., per . cube	2	5½
do. delivered on road waggons at Pimlico Vharf or Nine Elms Depôt, per ft. cube	2	6½

ite basebed, 2d. per ft. cube extra.

OM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
ter in blocks	2	0	Closeburn Red Freestone	2	2
n blocks	1	7½	Red and White Mansfield Random block	2	9
ill in blocks	2	4	Yellow Magnesian Limestone do. do.	3	3
Dale in ks	2	5			

STONE—*Robin Hood Quality.*

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
led random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
sawn two sides landings to sizes (under ft. super.)	2	5
rubbed two sides, ditto	2	8
sawn two sides slabs (random sizes)	1	0½
o 2½ in. sawn one side slabs (random sizes)	0	8¼
to 2 in. ditto, ditto	0	6¾

YORK—

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
led random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
sawn two sides landing to sizes (under 40 ft. er.)	2	3
rubbed two sides ditto	2	7
sawn two sides slabs (random sizes)	1	0
self-faced random flags	0	5

TILES.

Per 1,000 f.o.r. London.

	£	s.	d.
machine-made tiles or hand-made sanded tiles from either Broseley or ffordshire district	2	12	6
mental ditto	2	15	0
nd valley tiles (per dozen)	0	5	6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£	s.	d.
Blue Bangor Slates, 20 by 10	11	16	0
quality ,, ,,	11	10	0
,, 16 by 8	5	15	0
Blue Portmadoc, 20 by 10	11	13	6
quality ,, ,,	11	3	6
,, ,, 16 by 8	5	15	0

WOOD.

nber prices should be confirmed, as the market is *changing daily.*

BUILDING REDWOOD.

Imported sizes.	Per standard.					
	£	s.	d.	£	s.	d.
: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., n. by 9 in., and 2 in. by 11 in.	33	10	0	34	10	0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard.					
	£	s.	d.	£	s.	d.
Deals: 3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32	10	0	33	10	0
Battens: 2 in., 2½ in., and 3 in. by 8 in.	31	10	0	32	10	0
2 in., 2½ in., and 3 in. by 7 in.						
2 in., 2½ in., and 3 in. by 6 in.						
2 in., 2½ in., and 3 in. by 5 in.						
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.						
3 in. by 4 in., and 3 in. by 4½ in.						
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.		
¾ in.	1	0	0			
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best		
Best Middling Dantzic and Memel Fir Timber Logs	Per load of 50 ft. cube.					
(average specification)	10	0	0	—		
Seconds do. do.	9	10	0	—		
9 in. to 10 in. do.	8	10	0	—		
6 in. to 8 in. do	8	0	0	—		
Stocks very limited.						
Sawn pitch pine logs (about	Per load.					
35 cu. ft. average)	12	0	0	13	10	0
Do. 6 in. to 10 in.	10	0	0	11	0	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	10	0	7	0	0
	Per standard.					
Best Pitch Pine Deals	34	0	0	35	0	0
Under 2 in. thick	0	10	0	extra.		

JOINERS' WOOD.

	£	s.	d.	£	s.	d.
White Sea First Quality Red:						
4 in. by 11 in.	39	0	0	40	0	0
3 in. by 11 in., and 2 in. by 11 in.	38	0	0	39	0	0
4 in. by 9 in.	37	0	0	38	0	0
3 in. by 9 in., and 2½ in. by 9 in.	36	0	0	37	0	0
9 in. by 11 in. boards	1	0	0	more than deals.		
7 in. and 8 in. battens	33	0	0	34	0	0
7 in. and 8 in. boards	1	0	0	more than battens.		
Third quality	2	0	0	less than best.		
Archangel White Deals—						
Best 3 in. by 9 in. and 10 in. and 11 in.	36	0	0	37	0	0
Seconds, do.	2	0	0	less than best.		
U.S. Battens	30	0	0	32	0	0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—						
	Per square actual.					
1¼ in. by 6½ in. planed and shot	1	16	0	1	19	0
1¼ in. by 6½ in. planed and matched	1	16	6	1	19	6
1 in. by 6½ in. planed and shot	1	9	0	1	12	0
1 in. by 6½ in. planed and matched	1	9	6	1	12	6
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1	4	0	1	6	0
1 in. by 6½ in. do.	1	10	6	1	12	0
⅝ in. by 6½ in. do.	1	0	0	1	1	0
Columbian or Oregon Pine,	Per standard.					
best quality	42	0	0	44	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.		
Oddments	39	0	0	,,		
Seconds, regular sizes	43	10	0	,,		
Oddments	37	10	0	,,		
Kauri Pine—Planks per ft. cube	0	8	0	—		
Wainscot Oak Logs, per ft. cube	0	10	6	0	12	6
Dry Wainscot Oak, per ft. super, as inch.	0	1	0	0	1	3
¾ in. do. do.	0	0	10	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0	1	0	0	1	4
Selected, Figury, per ft. super, as inch	0	1	6	0	2	6
Cuba Mahogany	0	1	6	0	2	6
Dry Walnut, American, per ft. super, as inch	0	1	0	0	1	3
French, "Italian," Walnut	0	1	0	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	34	0	0
Do. do. (Java)	25	0	0	27	0	0
American Whitewood planks, per ft. cube	0	6	6	0	7	6

METALS.

JOISTS, GIRDERS, &c.

	In London or Railway Vans,			delivered per ton.		
	£	s.	d.	£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	0	0	21	0	0
Plain Compound Girders, ordinary sections	22	0	0	23	0	0
Plain Compound Stanchions	23	0	0	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	21	10	0
Flitch Plates	20	10	0	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	14	0	6

(Turning extra.)

	Per ton, in London.					
IRON—	£	s.	d.	£	s.	d.
Common Bars	16	0	0	—		
Staffordshire Crown Bars, good merchant quality	16	0	0	17	0	0
Staffordshire "Marked Bars"	17	10	0	18	0	0

METALS (*Continued*).

	Per ton, in London.					
IRON—	£	s.	d.	£	s.	d.
Mild Steel Bars	18	0	0	18	10	0
Steel Bars, Ferro-Concrete quality, £18 basis price.						
Hoop Iron, basis price	20	0	0	20	10	0
,, ,, Galvanised	33	0	0	—		
(* And upwards, according to size and gauge.)						
Sheet Iron Black—						
Ordinary sizes to 20 g.	20	10	0	21	0	0
,, ,, 24 g.	21	10	0	22	0	0
,, ,, 26 g.	22	10	0	23	0	0
Sheet Iron, Galvanised flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31	0	0	—		
Ordinary sizes to 22 g. and 24 g.	31	10	0	—		
Ordinary sizes to 26 g.	34	0	0	—		
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	33	0	0	—		
,, ,, 22 g. and 24 g.	33	10	0	—		
Ordinary sizes to 26 g.	36	10	0	—		
Galvanised Corrugated Sheets—						
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29	0	0	—		
Ordinary sizes, 22 g. & 24 g.	29	10	0	—		
Ordinary sizes, 26 g	30	0	0	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23	10	0	—		
Best Soft Steel Sheets, 22 g. and 24 g.	23	15	0	—		
Best Soft Steel Sheets, 26 g.	25	10	0	—		
Cut Nails, 3 in. to 6 in.	24	0	0	25	0	

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

	£	s.	d.	
LEAD—Sheet, English, 4 lb. and up	41	10	0	—
Pipe in coils	42	0	0	—
Soil pipe	45	0	0	—
Compo pipe	45	0	0	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.	
COPPER—					
Strong Sheet	per lb.	0	1	6	—
Thin ,,	,,	0	1	8	—
Copper nails	,,	0	1	6	—
Copper wire	,,	0	1	8	—
BRASS—					
Strong Sheet	,,	0	1	6	—
Thin ,,	,,	0	1	8	—
TIN—English Ingots	,,	0	2	0	—
SOLDER—Plumbers'	,,	0	0	11	—
Tinmen's	,,	0	1	2	—
Blowpipe	,,	0	1	4	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
,, fourths	4¾d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	2
,, ,, ,, in barrels	,,	0	3	3
,, ,, ,, in drums	,,	0	3	6
Boiled ,, ,, in barrels	,,	0	3	5
,, ,, ,, in drums	,,	0	3	9
Turpentine in barrels	,,	0	3	7
,, in drums	,,	0	3	10
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	58	0	0
Red Lead, Dry	per ton	58	0	0
Best Linseed Oil Putty	per cwt.	0	12	0
Stockholm Tar	per barrel	4	5	0
Filocol	per cwt.	0	9	6
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	73	0	0

VARNISHES, &c.

	Per gallon.		
	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

FARNBOROUGH (Hants).—For the supply of sand, to be delivered on the roads, for the District Council :—

J. Ratcliffe*	6s. per yard.

LONDON.—For the scavenging of the Victoria-embankment and the Waterloo, Westminster, Lambeth, and Vauxhall Bridges for a period of two years from April 1, 1916, for the London County Council. The following is a comparison of the estimated cost of the work based on a schedule of prices submitted by each tenderer :—

N. Wise	£3,677	4	0
Wakeley Bros. & Co., Ltd.	3,537	12	0
H. Boyer	3,360	0	0
A. Pannell, Fentiman-road, S.W.*	2,575	16	0

LONDON.—For the supply to the Westminster City Council of 115,000 wood-paving blocks :—

Acme Flooring and Paving Co. (1904), Ltd.‡	£2,196	5

‡ Recommended for acceptance.

LONDON.—Accepted by the Metropolitan Water Board for the supply of stores, etc. :—

Battersea (Stock).—Lead Pipe.			
J. R. Miles & Son	£25	15	10
Battersea (Stock).—Brass and Copper Tubes, Sheets, etc.			
J. R. Miles & Son‡	27	0	0
Battersea (Stock).—½-in. Ferrules.			
J. Bolding & Sons, Ltd.	29	3	4
Battersea (Central Buildings).—Turntables, Steel Rails, etc.			
Kerr, Stuart, & Co., Ltd.	37	15	0
Battersea (Western).—Dirt-boxes and Siemen's Meters.			
R. Laidlaw & Son (Edin.), Ltd.	54	10	0
Kent (Sundridge).—Steel Borehole Pipe.			
A. Potter & Co.‡	30	0	0
Kent (Deptford).—Spring Rings for Air-Pump Brackets and Force Pump.			
Dewrance & Co.	26	2	6
Kent (Shortlands).—Overhead Travelling Crane.			
H. Morris, Ltd.	220	15	0
Kent (Northern).—Yellow Deal.			
Burt, Boulton, & Haywood, Ltd.	47	7	6

‡ Approximate.

LONDON.—For the execution of the necessary painting work at the new West Norwood fire-station, for the London County Council :—

J. C. Mather*	£170

LONDON.—For the painting work necessary in connection with the conversion of the Bayswater fire sub-station into a full station, for the London County Council :—

G. Godson & Sons*	£124	17	1

LONDON.—For the execution of the necessary painting work at the new West Norwood fire-station, for the London County Council :—

Triggs & Co.*	£264

LONDON.—For demolishing and clearing No. 143, Green-street, premises acquired for the enlargement of the Bonner-street School site, Bethnal Green, N.E., for the London County Council :—

H. Base*	£105

LONDON.—Accepted by the London County Council for the supply of materials during the year 1916-17 :—

(i.) Fry Bros., Ltd., for about 5,450 tons of granite setts (estimated expenditure, £11,677 10s.); (ii.) the Acme Flooring and Paving Co. (1904), Ltd., for 475,500 creosoted deal paving blocks (estimated expenditure, £7,378); and (iii.) P. Smith, for about 23,000 Jarrah wood blocks (estimated expenditure, £107 17s. 6d.).

LONDON.—For the execution of certain works required for adapting Evelyn-street, Deptford, depôt for the accommodation of trailer cars, for the London County Council :—

J. Garrett & Son	£1,977
J. & C. Bowyer, Ltd.	1,879
F. & T. Thorne, Manchester-road, E.*	1,796

RUISLIP-NORTHWOOD. — Accepted by the Urban District Council for the supply of the following requirements for the year ending April 30, 1917 :—

Granite.—Machine broken : Croft Granite Co., Ltd., Croft, 13s. 10d. per ton, delivered to Northwood; Clee Hill Dhu Granite Co., 14s. per ton, delivered to Eastcote and Ruislip. Hand-broken : Clee Hill Dhu Granite Co., 15s. 4d., delivered to Northwood.

Bituminous.—Northern Quarries Co., Ltd., 19s. 11d. per ton, delivered to Northwood; £1 per ton, delivered to Eastcote and Ruislip.

Coarse Gravel.—C. & G. Horwood Bros., 3s. 9d. per ton, delivered to Northwood; 4s. 7d. per ton, delivered to Eastcote and Ruislip.

Roller Hoggin.—C. & G. Horwood Bros., 3s. 3d. per ton, delivered to Northwood; 4s. 5d. per ton, delivered to Eastcote and Ruislip.

Footpath Hoggin.—C. & G. Horwood Bros., 4s. 6d. per yard, delivered to Northwood; and 5s. 3d. per yard, delivered to Eastcote and Ruislip.

Portland Cement.—F. Costin, £2 6s. per ton, delivered to Northwood.

Hire of Steam-roller.—C. & G. Horwood Bros., 8 to 10 ton roller, at £1 5s. per day.

Repairing Tools.—E. Doe and F. Tapping.

Team Labour.—E. Lee & Son, ordinary cart 12s. per day, 1s. 6d. per hour, Northwood; E. Wiles, 12s. per day, 1s. 6d. per hour, Eastcote; H. Paradine, 12s. per day, 1s. 6d. per hour, Ruislip.

Carting Materials.—E. Lee & Son, first mile or cube yard 1s. 3d., second mile or cube yard 9d., Northwood; E. Wiles, 1s. 3d. and 9d., Eastcote; H. Paradine, 1s. 3d. and 9d., Ruislip.

TRADE NEWS.

Boyle's latest patent "air-pump" ventila have been adopted in the New Hippodro Linden-crescent, Folkestone.

A grit chamber at Huntingdon. thro which water was continually percolating, been made watertight by the use of Pud cement concrete.

The Hendon Wire Rope Works, Sunderl have been supplied with Shorland's pa exhaust roof ventilators by Messrs. E. Shorland & Brother, Ltd., of Failsw Manchester.

We recently received from Messrs. T. & Farmiloe, Ltd., Rochester-row, S.W., a sar of "Matex"—a plastic repairing comp for roofs—which we used on the roof o outhouse and found it easy to apply with ordinary knife. The result is very satisfact and "Matex" appears to fulfil all the pur claimed for it.

◆

PATENTS.

APPLICATIONS PUBLISHED.*

3,674 of 1915.—Frank Woodward Skin Sheet-metal buildings or structures.

5,449 of 1915.—Pulsometer Engine Company, Ltd., and Jorgen Bjorns Hydraulic air pumping arrangements.

5,599 of 1915.—William Henry Keny Self-closing sliding door.

5,796 of 1915.—Francis Whitwell Brac and F. W. Brackett & Co., Ltd. : Device the mechanical purification or straining of and like water.

5,849 of 1915.—George Henry Dun Excavating machinery.

8,684 of 1915.—Peter Fyfe : Pressure flus tanks and valves for water-closets, slop s and the like.

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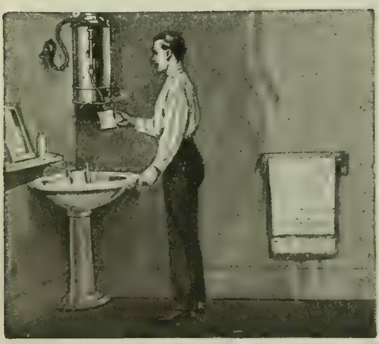

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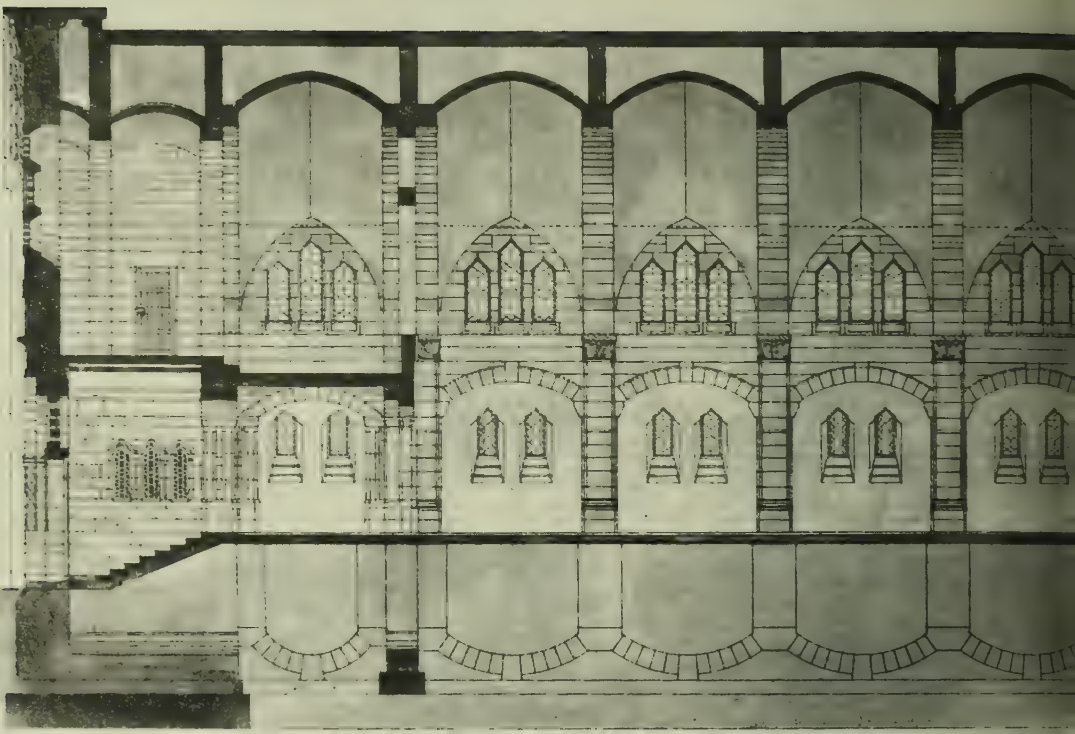
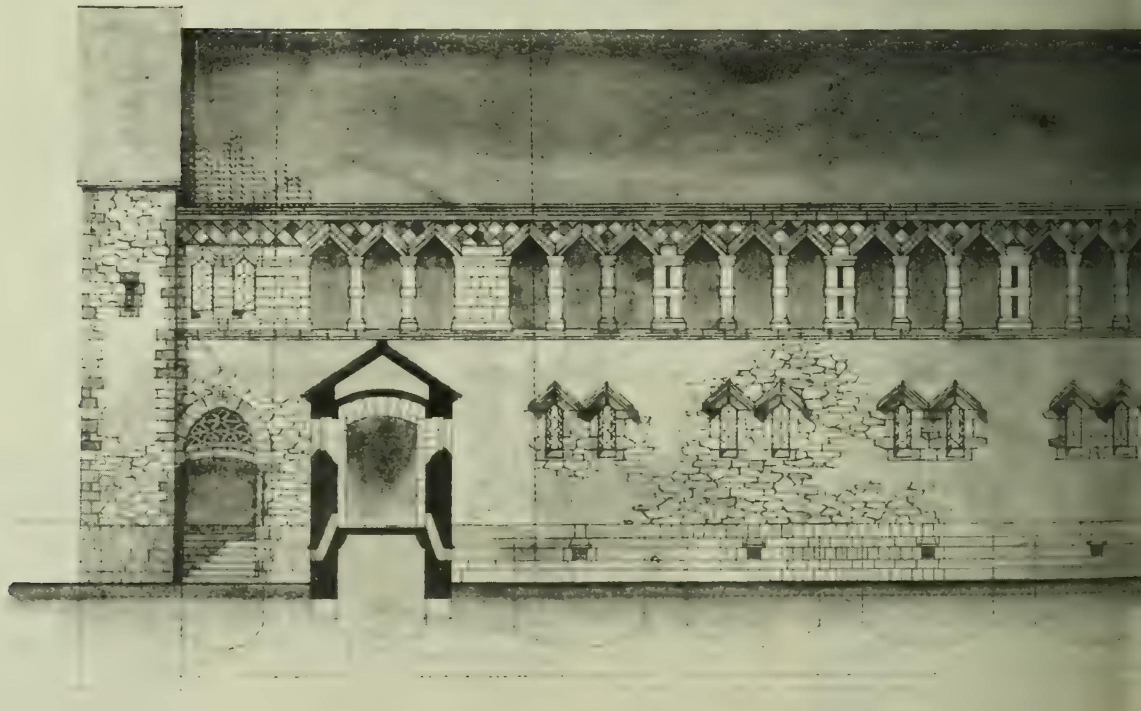
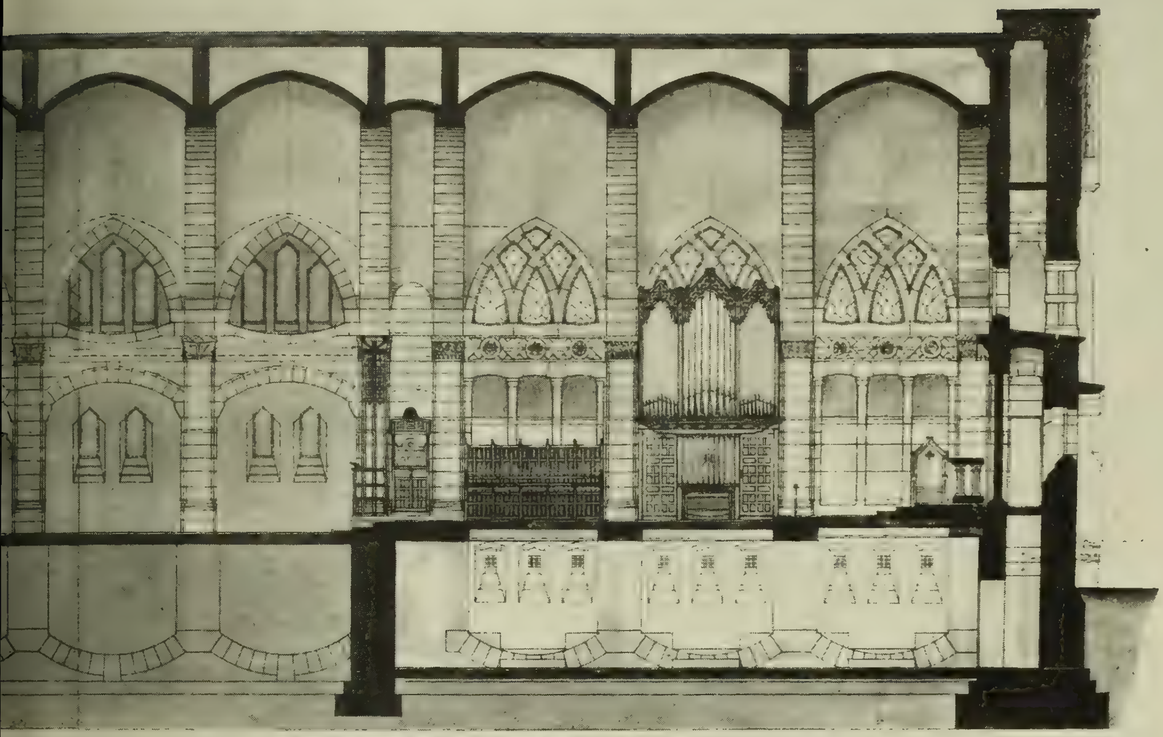


LONGITUDINAL SECTION WEST END



SOUTH ELEVATION WEST END

KHARTOUM CAT



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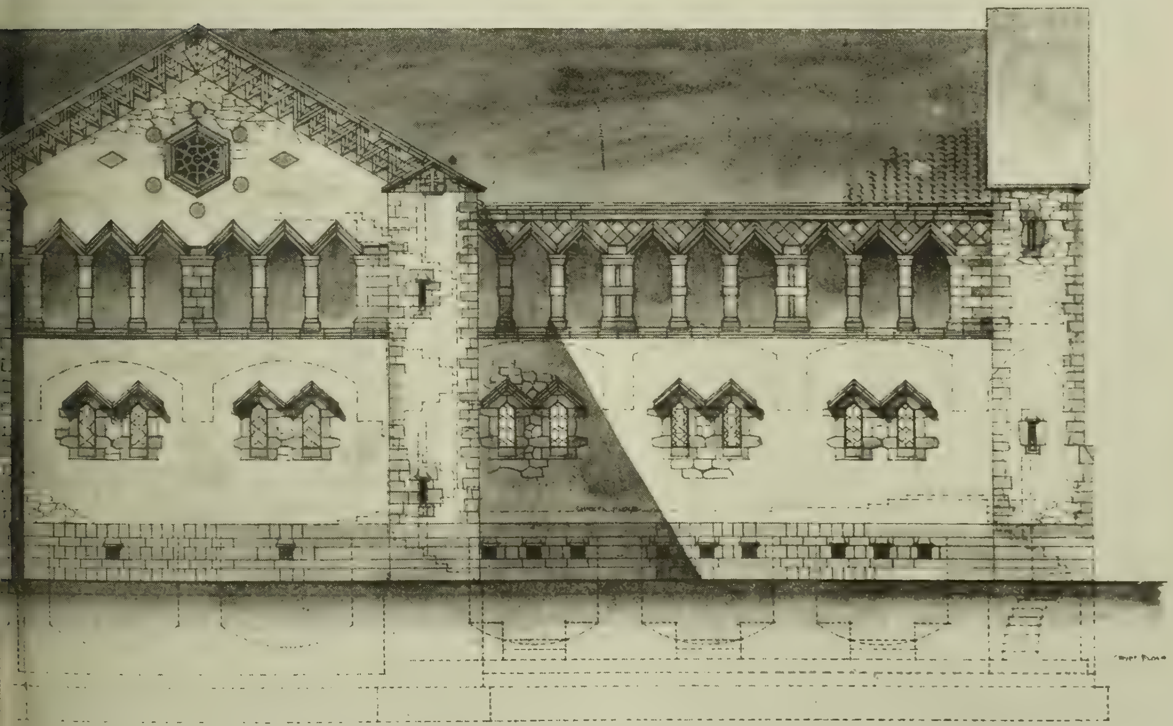

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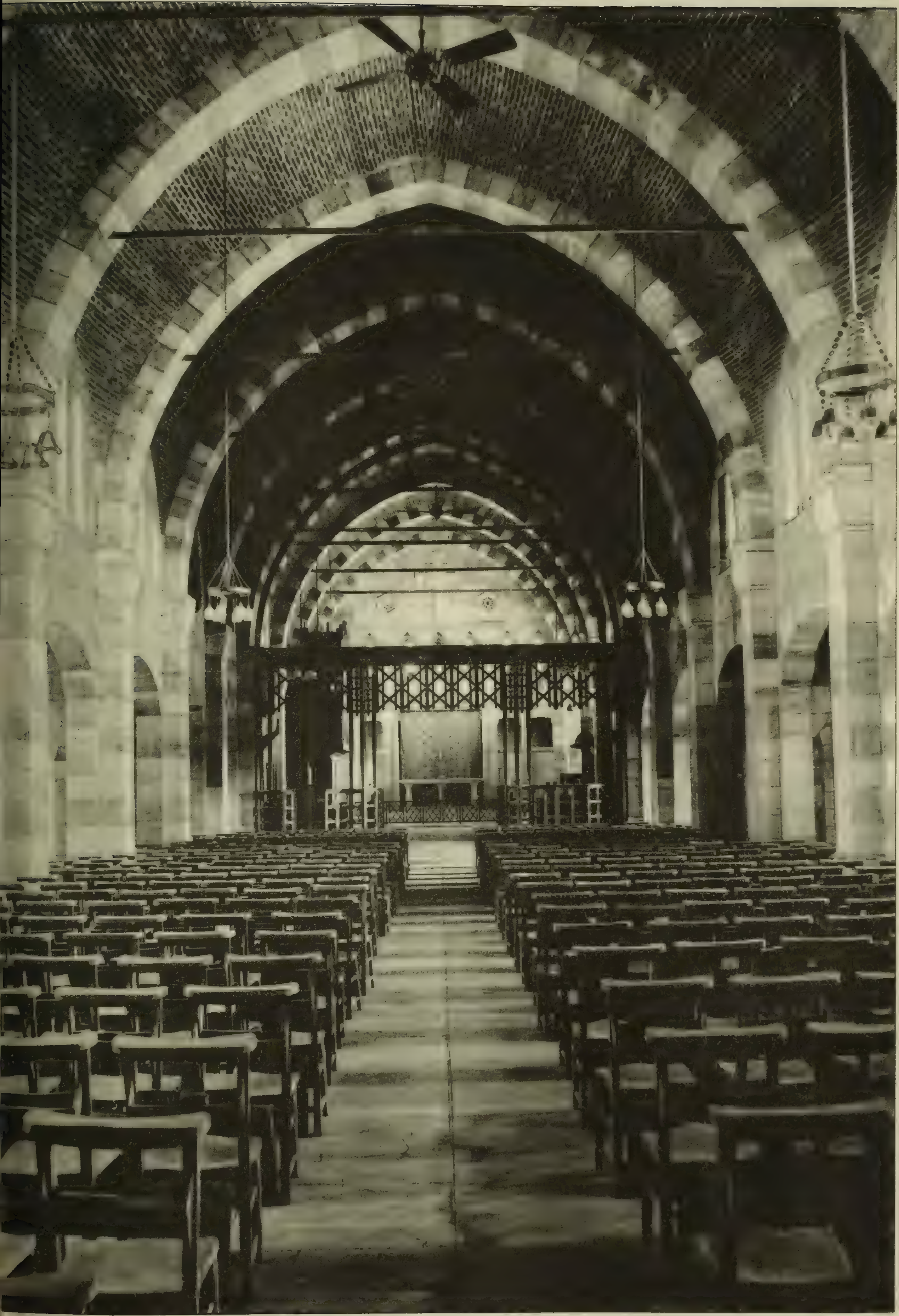
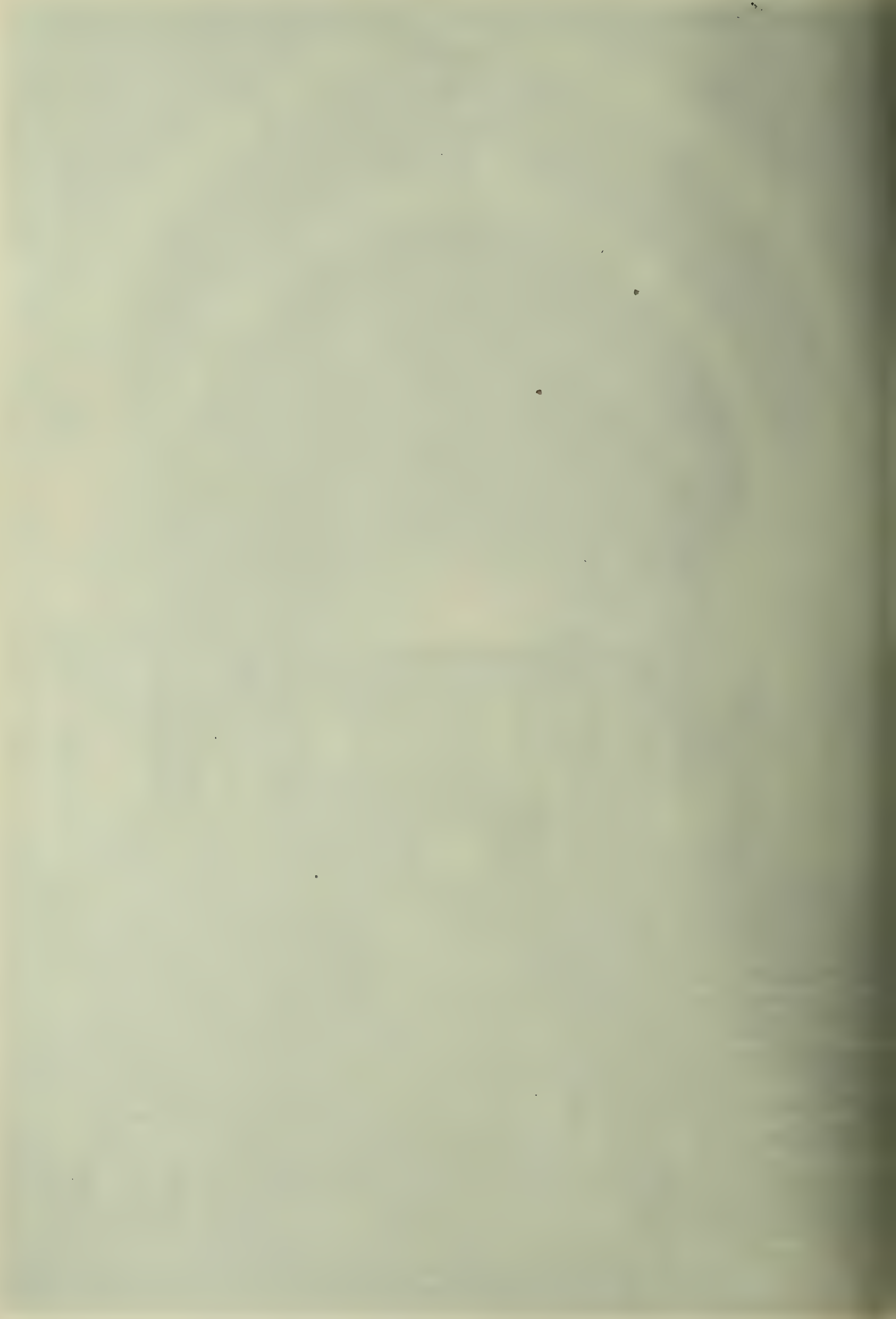


KHARTOUM CATHEDRAL: NAVE, LOOKING EAST.—MR. ROBERT W. S. WEIR, ARCHITECT.



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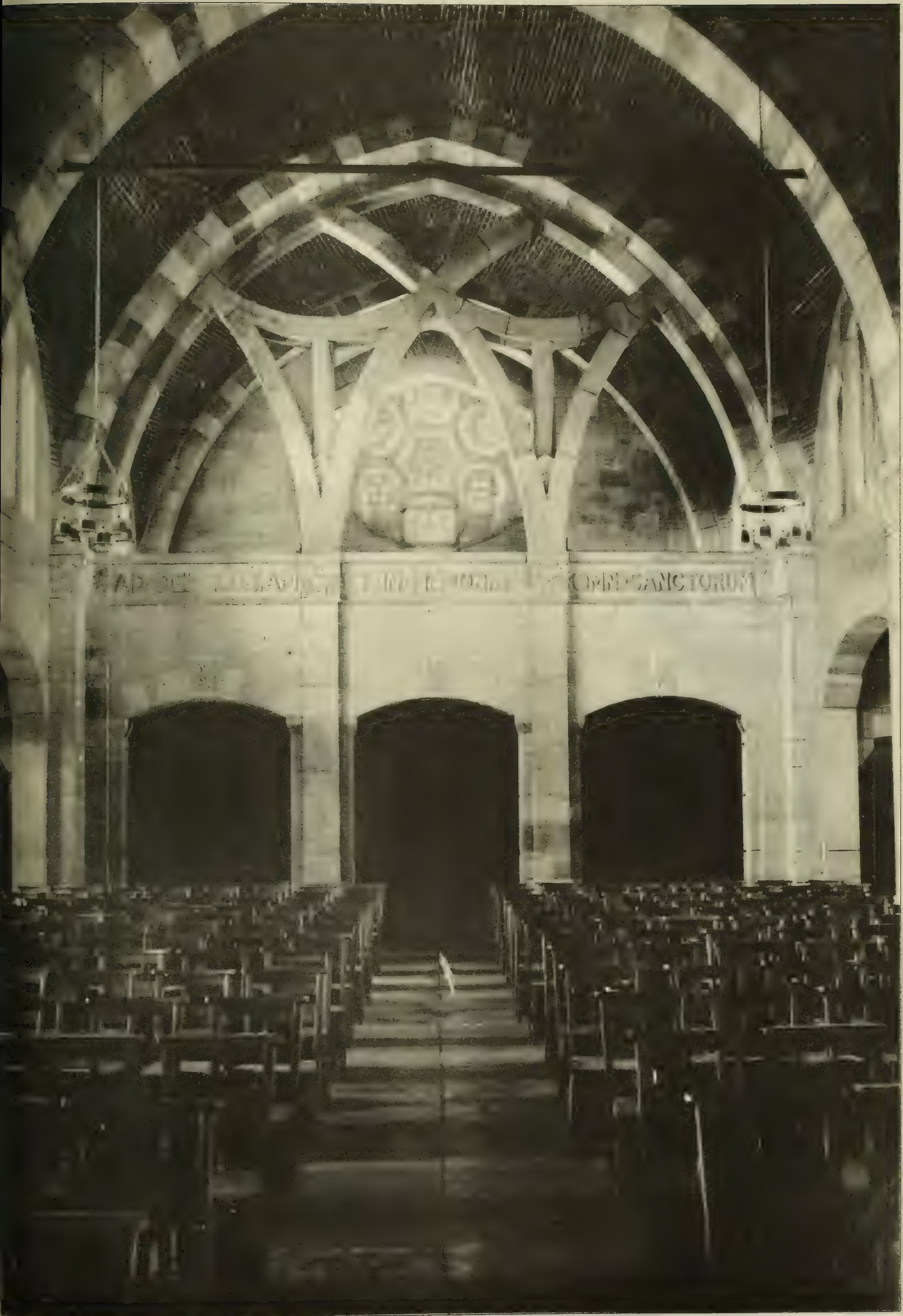
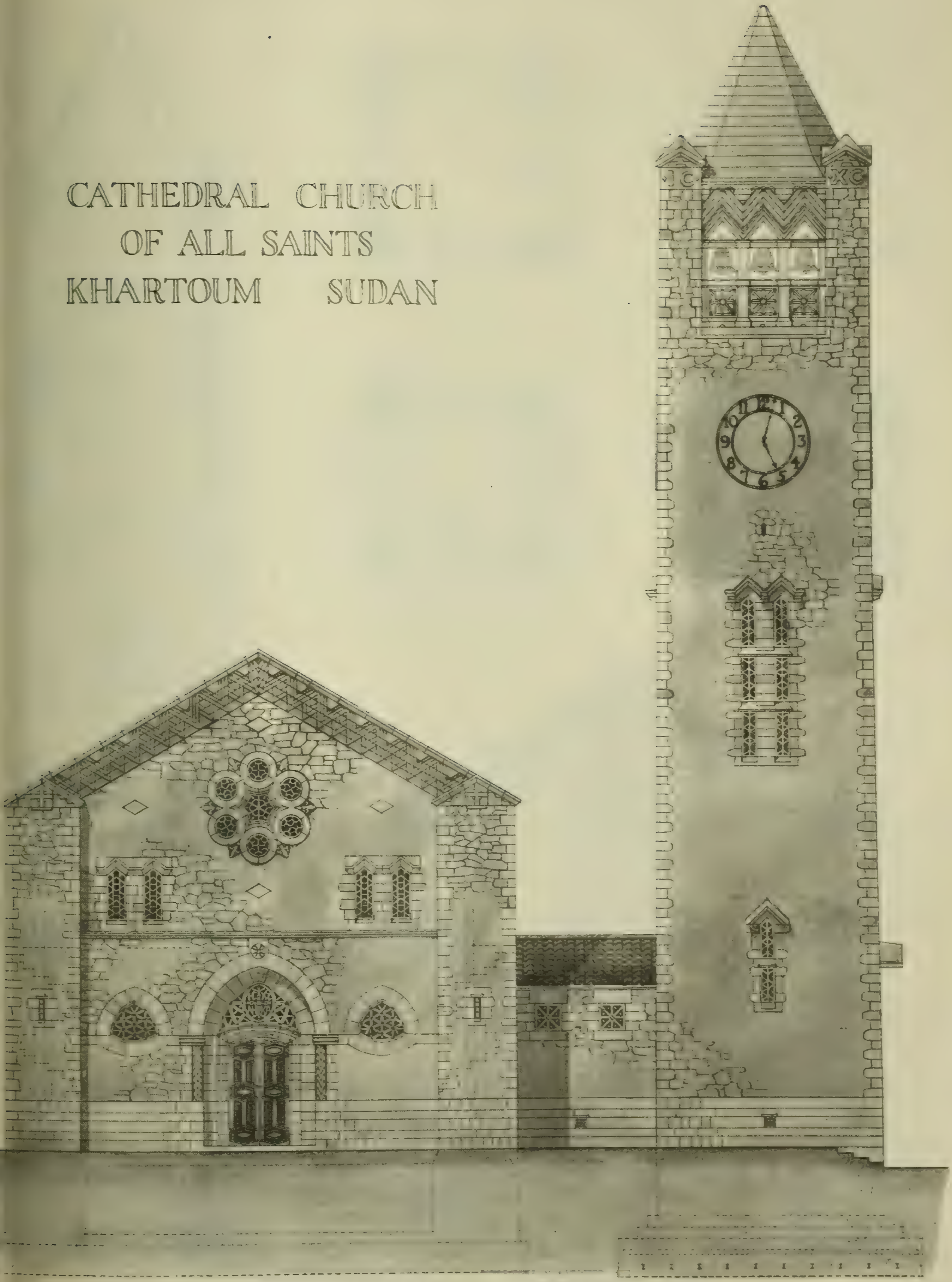


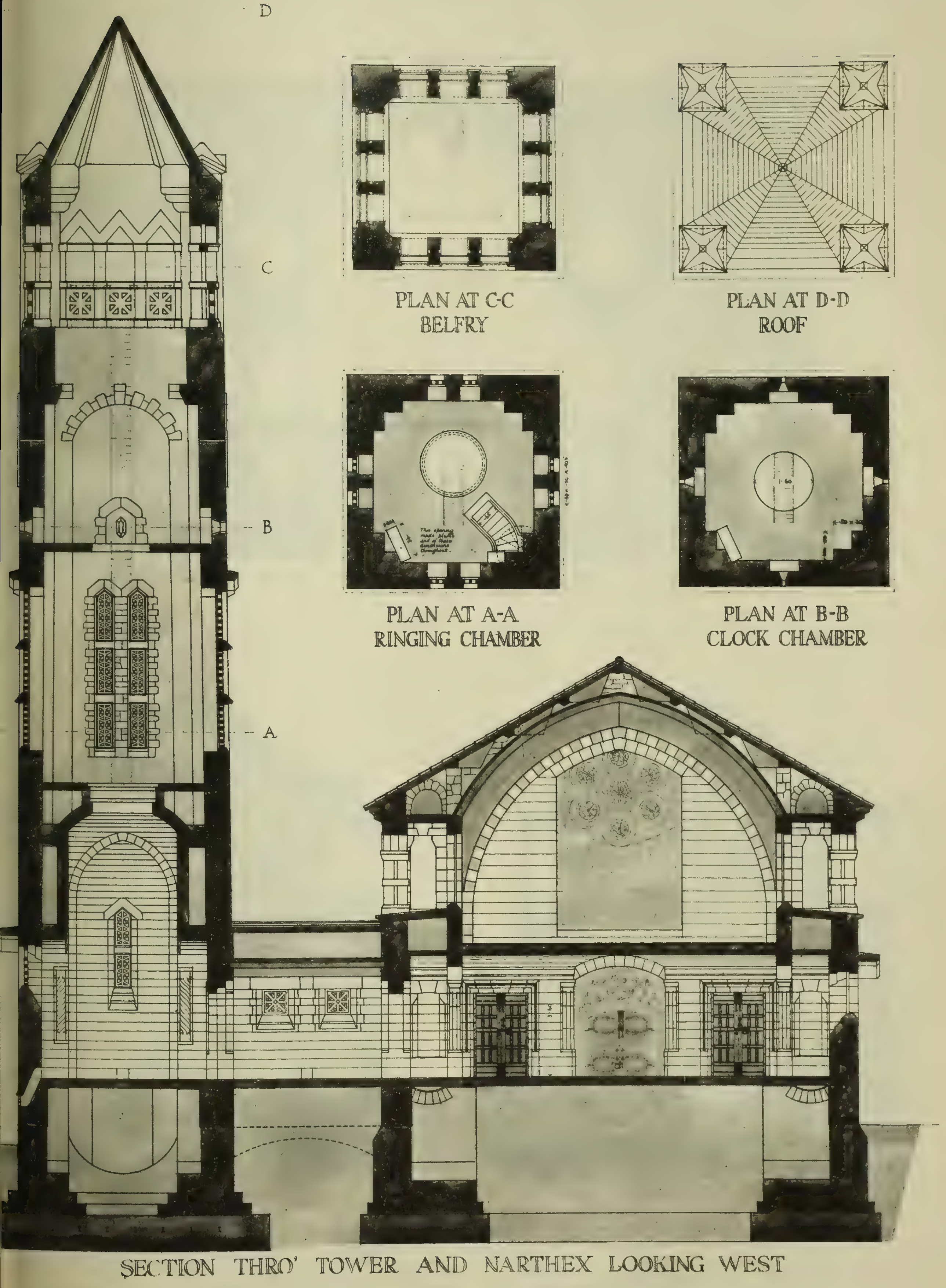
KHARTOUM CATHEDRAL: VIEW OF NAVE, LOOKING TOWARDS NORTH-WEST.—MR. ROBERT W. S. WEIR, ARCHITECT.

CATHEDRAL CHURCH
OF ALL SAINTS
KHARTOUM SUDAN



WEST ELEVATION & TOWER

MR. ROBERT W. S. WEIR, ARCHITECT.



PLAN AT C-C
BELFRY

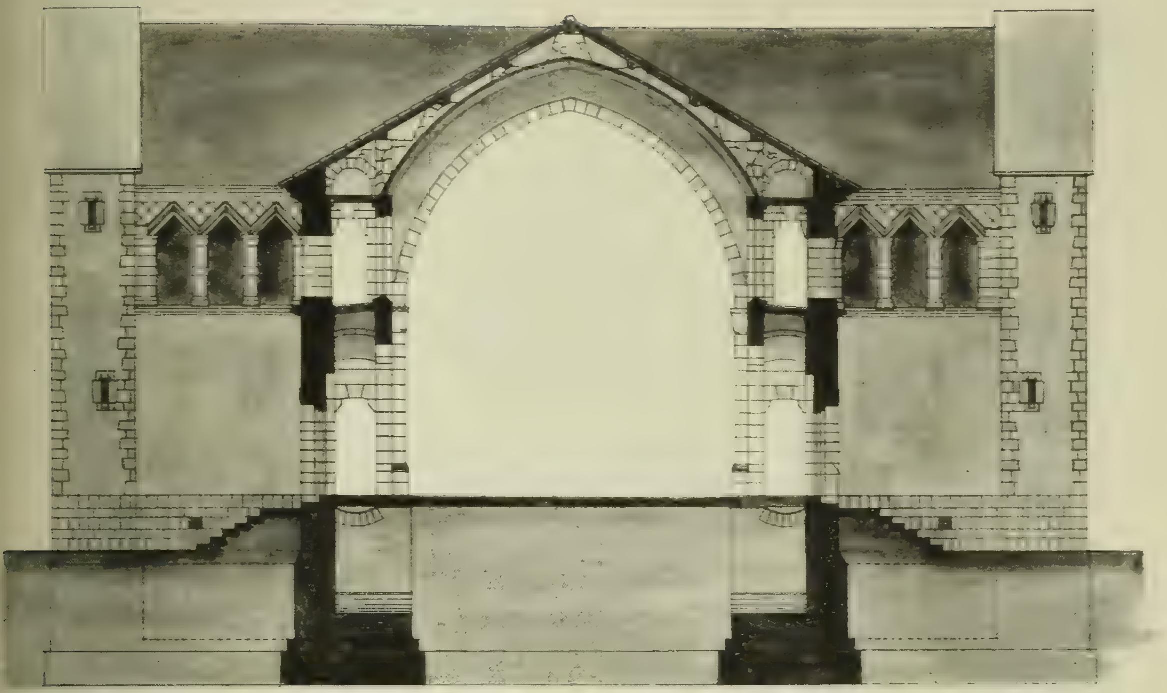
PLAN AT D-D
ROOF

PLAN AT A-A
RINGING CHAMBER

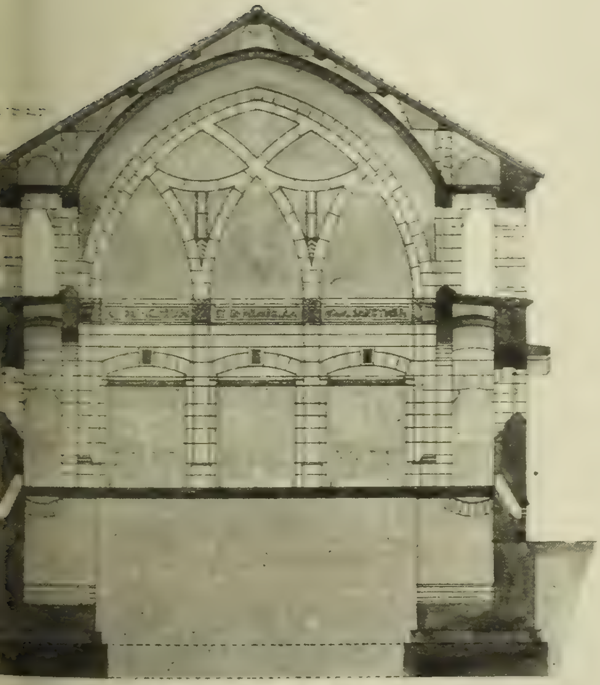
PLAN AT B-B
CLOCK CHAMBER

SECTION THRO' TOWER AND NARTHEX LOOKING WEST

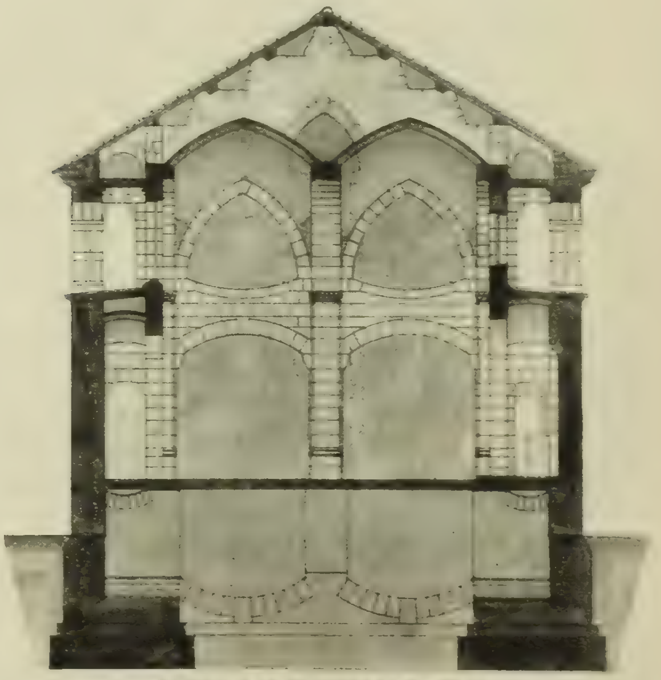
KHARTOUM CATHEDRAL.—MR. ROBERT W. S. WEIR, ARCHITECT.



SECTION THRO' NAVE LOOKING EAST

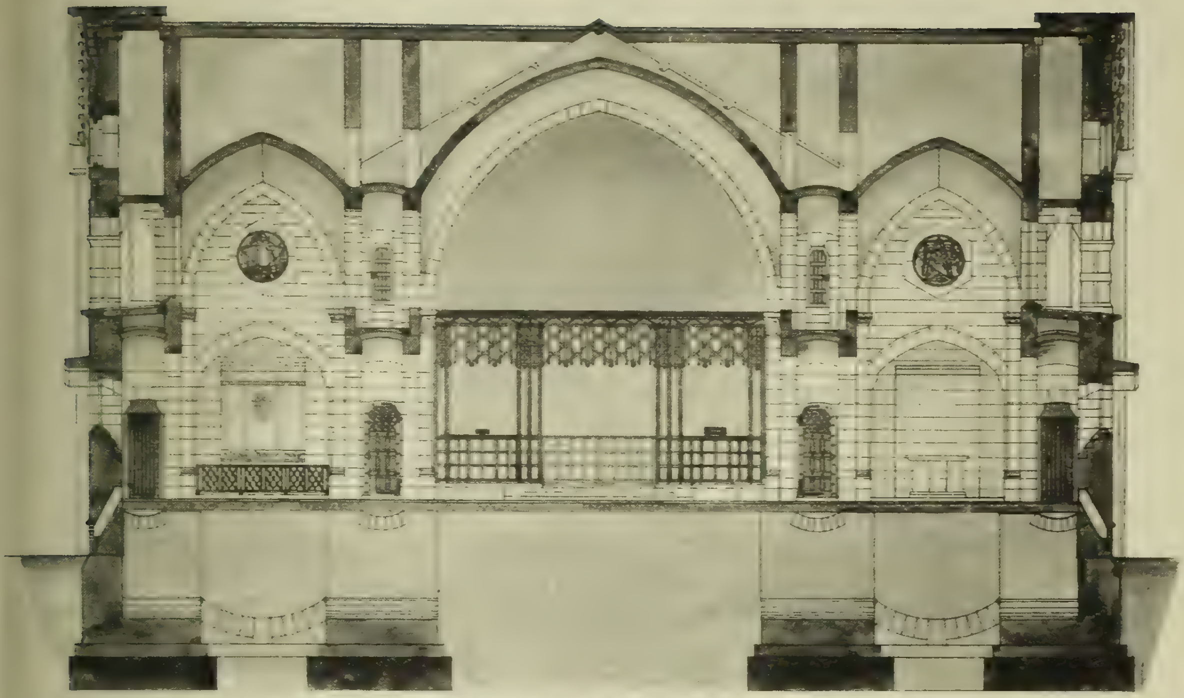


SECTION THRO' NAVE
LOOKING TO NARTHEX

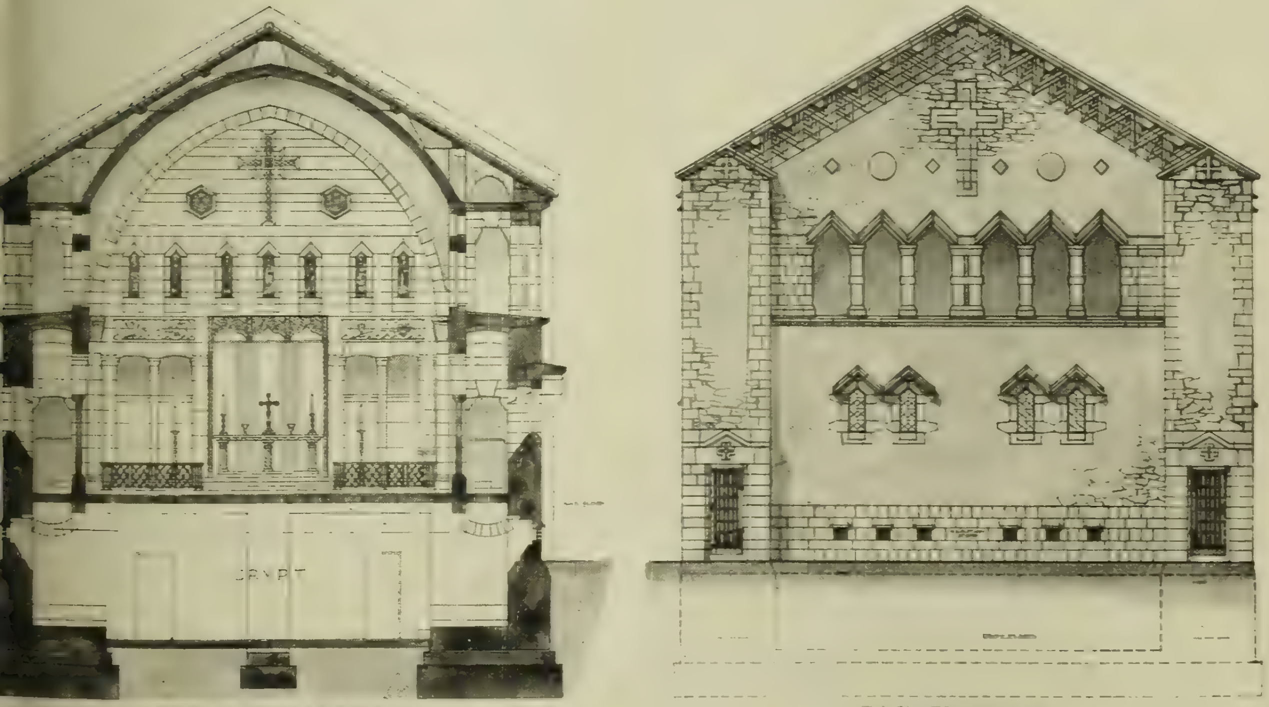


SECTION THRO' TRANSEPT
LOOKING TO CHURCH

KHARTOUM CATHEDRAL.—MR. ROBERT W. S. WEIR, ARCHITECT.



CROSS SECTION THRO' NAVE & TRANSEPT



SECTION THRO' CHANCEL LOOKING EAST

EAST ELEVATION

KHARTOUM CATHEDRAL.—Mr. Robert W. S. Weir, Architect.

HE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

CX.—No. 3825. MAY 26, 1916.

"ARCHITECT AND SURVEYOR."

MANY problems, ancient and modern, have been pronounced to be insoluble; among them we may recall the mediæval controversy as to the number of angels who could dance on the point of a needle, and the unsolved question he priority of the owl or the egg. One of the practical problems affecting architects is the serious question as ther a man's material prospects are better should he e himself as an "architect" or, on the other hand, as chitect and surveyor."

frequently say there is little in a name, but we sometimes at a good deal depends on it, and outside London most cts prefer the double designation mainly for the ng reasons.

work of the provincial architect is generally of a very nore varied character than that of his brother in London; usually include, in all but the larger provincial centres, land surveying and levelling, with a knowledge of the ite. If his practice lies away from a great centre he ore frequently than not takes out the quantities for his ork, and is therefore a quantity surveyor as well. Very e is a skilled valuer of property in addition, and all egoing give him an actual title to call himself "surveyor" ualify him for carrying on a widely varied series of tions. The provincial architect usually holds that it is d necessary to be equipped with the requisite knowledge le him to cope with a varied range of business, which ltimately lead up to building, and unless he is so ed he may share the fate of a specialist in a small town. st architects outside London are men of a wide range of dge, which enables them to give the most valuable to those dealing with property. Having to deal with atters concerning building, they make themselves ndent of extraneous assistance on which many London cts largely depend.

London architect, on the other hand, usually describes as an "architect" only. Sometimes he deals with surveying matters, frequently he confines himself to eparation of designs and the superintendence of actual More often than not, if quantities are required, a quantity or is employed, who in larger works takes a good deal of work off his shoulders, enabling him to devote a greater tion of his time to his purely architectural duties. In ases an architect feels that any addition to the title to detract from the emphasis which should attach to cture as an art; while he points out that the concentra- his efforts makes for efficiency and marks a distinction n him and the class of men whose practice is of a more aneous character.

title "surveyor" standing by itself has the dignity rical association. The great architects of the past, among may be mentioned Inigo Jones and Wren, were always ed as surveyors, a practice adhered to by the City nies, the Office of Woods and Forests, and many other That Wren's functions included giving businesslike on many very practical questions is proved by passages *Parentalia*, in which the manner he considered tenants of ty required for rebuilding or street improvements might e dealt with is described; in fact the terms "art" and tical," so commonly in use in the present day, are cuous by their absence from the records of the enth and previous centuries, and the cult of the self- on of the artist had not made its appearance.

e danger of the present practice seems to us to rest in the ption sometimes met with that the "architect" is not a practical man; while the "surveyor" is a distinction which sometimes leads to the "surveyor" or the "architect and surveyor" being called in with respect to some practical question connected with building, which may serve as an introduction to future building, whereas "architect" is passed over as not being a business man. We may assume that, while an architect may merit the title "artist," he will rarely get work given to him on this score, and that a reputation as a business man will cause people to consult him. It may be questioned by some whether an architect who has no knowledge of surveying *per se* has any right to describe himself as a surveyor in addition. We should be inclined to say that since the term "architect" used by itself is sometimes held to imply that a man has artistic but not practical qualifications, it is perfectly fair to supplement it with the addition "and surveyor" if it is held that this corrects a misapprehension. A survey of a subject implies a comprehensive view, and an architect, if he be a man of judgment, ought to be able to take such a view. Whether he is trained in actual surveying or valuation or not, he should be competent to form a sound opinion on the value of a building or site as an investment, and, as the most useful of all knowledge is to know one's limitations, he should know when to supplement his knowledge if necessary. The essential object is to give sound and trustworthy advice; the actual process by which that advice is arrived at is immaterial.

The title of "ghost" is given to a man who habitually supplies another's deficiencies, yet the so-called architect who knows his shortcomings and employs an able "ghost" is an infinitely safer man to employ than the possessor of the little knowledge which is so dangerous an acquisition. We are not defending an evil practice, and would much prefer to know that all architects were competent and made their own designs; but, as it is impossible to exclude all incompetent and ignorant men, we should be glad if some of them recognise their shortcomings sufficiently to prevent their clients suffering thereby.

The question of the advantages of specialising forms part of the problem, and with regard to it we may say that an architect will not necessarily work better for being confined to one class of work or one type of building, because such a limitation often produces weariness and a disposition to produce tame and uninteresting work. On the other hand, he will become a better planner and designer if most of his time is spent on such problems, and he is not occupied by work of the very wide range which often falls to the provincial architect. But the all-round knowledge of the provincial architect frequently produces a type of man who is exceptionally competent as an adviser, and such men promote confidence and respect for the profession wherever they exist. Like the general practitioner in medicine, they fill a position where a man of more specialised attainments would be almost useless, and like the general practitioner they are in many cases men of very great competence. A knowledge of surveying in the more restricted sense of the law of ancient lights, easements, and other questions affecting land and property is very necessary in London, and the architect with a good first-hand knowledge and experience in such questions forms a safer adviser to his client than one whose training and experience have been architectural only, which is an additional reason for thinking the double qualification a valuable one. But the question must be left to the individual for solution, as, like the mediæval problems we have alluded to, a good case can be made out for those who hold either view. But whichever solution we may prefer, we are convinced that one of the most valuable of all assets to the architect is what has been termed "the uncommon gift of common sense."

NOTES.

The Rebuilding of Sackville-Street, Dublin. Mr. Thomas Mawson, in a letter to the *Times*, expresses the hope that advantage will be taken of the deplorable destruction which has been wrought in Central Dublin to replan the area on broad and suitable lines. It is too often the case that good schemes are spoilt through the timidity which those in authority feel about interfering with private interests, which prevented, in Wren's time, the adoption of a lay-out which we should be grateful for to-day. We do not know whether the area affected was dealt with in the recent Town-Planning Competition held in Dublin, but if it was included some good scheme may have been brought into the region of practical politics by recent events. If not, it would be a wise measure to institute another competition for the area affected, and, since the tax-payer of the United Kingdom is to find the money, the competition should be open to all. There can, we suppose, be no question of extensive rebuilding during the war, and this should afford an additional reason for thinking the matter out thoroughly now.

The Double Choir of Glasgow Cathedral. Mr. T. L. Watson has written a revised and condensed edition of his former work on the "Double Choir of Glasgow Cathedral," a building which, he says, "provides the best illustration we have in any single building of the regular and consistent development of the early Pointed style of architecture." It was believed that the whole of the lower vaulting, except that of one small corner, belonged to one period, but Mr. Watson has demonstrated that no fewer than five distinct styles, each separated by an interval of time, can be traced in the vaulting of the choir. The book is admirably illustrated, particularly by a large plan of the lower vaulting, in which the different forms of ribs are distinguished by colour. Our knowledge of the past has been enormously increased of late years, as the discoveries of the remains of ancient Rome and of ancient Egypt prove, and each discovery makes others more possible, so that year by year the past gains in interest and colour, and is more definitely differentiated from a mere field of speculative interest.

Cannington Park Camp. Mr. St. George Gray, whose archæological work in the West Country is well known, has directed attention to the damage that has recently been suffered, in consequence of recent activities at the ancient fort of Cannington Park, distant about four miles from Bridgwater. Cannington, a place of much importance formerly, gave its name to the hundred; Camden derives the name from a British tribe, the Cangi. The earthwork lies on a steep hill of carboniferous limestone which rises to an altitude of some 260 ft. within the enceinte. Dry-stone ramparts, similar to those at Worlebury, Weston-super-Mare, encompass the camp; the entrance lies towards the east, and the outside passageway is strongly entrenched; a modern stone wall surrounds the whole. It seems that large trial-excavations have been made in the thin top layer of soil for the purpose of obtaining barytes, the "heavy spar," or sulphate of barium, much used for industrial purposes. A pack of mules, too (since removed by the authorities), did much injury to the ground, laying bare many relics of the ancient occupation of the fort; it is feared, moreover, that the search for barytes, which is plentiful in the neighbourhood, will be continued within the camp.

The Veterans' Club Association. We have received a copy of an appeal for funds from the Veterans' Club Association. The Duke of Bedford and the Lord Mayor are Hon. Treasurers of the Association, and the appeal is signed, among others, by Sir Frederic Milner, General J. Hills-Johns, Sir Arthur Conan Doyle, and Mr. H. Rider Haggard. It is pointed out that the establishment of a great club with branches all over the country would be a very suitable memorial to the heroes of the Great War, and may do much good when the establishment of peace is followed by the return of our soldiers and sailors. Among the objects which are mentioned specially in the appeal are the purchase and transfer to the club of a suitable building which is now in the market and its endowment as an Imperial Memorial, also the endowment of a splendid country house which has been offered to the Committee as a convalescent home, and it is estimated that for this and other purposes £250,000 will be required. Donations and subscriptions should be sent to the Lord Mayor or the Duke of Bedford, care of Messrs. Cox & Co., Army Agents, 16, Charing Cross, and the offices of the Organising Secretary are at 1, Adelphi House, Adelphi, W.C. The object of the promoters is an admirable one, and we trust their appeal will meet with a well-deserved success, as it should, despite the many demands these times bring with them.

Nottingham. The city of Nottingham is one of the most progr centres in England, and its corporation have foll the excellent plan of issuing a well-arranged bo which, after a brief descriptive *résumé* of its historic past, gi description of the facilities which it can offer to traders and on account of its municipal services and the disposition and cha of land available in its vicinity. To the foregoing is added a account of the trades and industries of which it is a centre. to similar methods of industry and publicity that Chicago ow enormous growth, and the geographical position in the centra of the United States is not unlike the position which Nottin occupies with respect to the east and west coasts of England. our canal system be enlarged and brought into line with m requirements, Nottingham would be a great gainer, situated a at the junction of the River Trent with the central canal quadril which passes by Leicester, Birmingham, Burton-on-Trent Warwick, from the points of which waterways communicate wi Severn, Thames, Humber, and Mersey, while it has an excep position as a great railway centre.

The New Laboratories, University College. The new chemical laboratories at University C designed by Professor Simpson, have now opened and form a very fine addition to the for scientific research in London. The buildings, we illustrated some time ago, are an inter illustration of the manner in which Greek deta be adapted in modern architecture, and indicate the arch great knowledge of historic art and his originality of expr Though we are not inclined to consider that the type adapted suited to the expression of modern wants, and think it is som out of place in a climate like our own, we are glad to bear test to the admirable skill and care with which the buildings are des It is within the power of many to copy, but unfortunately cor tively few can adapt, and Professor Simpson has shown his in this direction, and it is by this method that progress in tecture must be sought. We may not all think alike, no desirable that we should; the essential thing in design is th should learn to think clearly and express our thought convictions with vigour and understanding.

Gretchen.

[This pleasing example of modern work is by Mr. Charles Pibworth, Sc

HE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

. XXXV.—The Campaniles of St. Paul's and the Successors of Wren.

VREN'S sense of fitness was never shown
conspicuously as in his treatment of the
npaniles which flank the western front of
Paul's. Unlike many of the Renaissance
hitects who have essayed the solution of
ilar problems and given us a classic render-
of a Gothic outline, preserving strongly-
rked vertical lines, Wren's composition
es the form of horizontally-treated upper
ries, superimposed on the horizontal Orders
ler. The break back over the line of the
in front emphasises this feature, and if we
sider the campaniles by themselves we
struck with the difference of the treatment
pted from that Wren used in designing his
eples, which all show the value he gave to
sense of dominance given by strong vertical
s. Yet the western towers of St. Paul's
nowhere weak or ineffective in design, while
form as designed is in perfect harmony with
effective contrast to the great mass of
dome behind, against which they appear
ouetted. Like many other of the architect's
rks, the building as actually carried out
mproved out of all recognition as compared
h the design indicated on the original
wings.

Vren lived to see himself discounted by a
nger generation, and the ingratitude with
ich the great are frequently treated was
mplified in his removal from office and in
petty persecution visited on him by the
horities for whom he had worked. More
n this, his architectural descendants and
owers imagined they could improve on
work, with the result that it was left to a
er generation rightly to estimate the great
f which separates genius from what may
termed capable achievement.

Gibb added an interesting but singularly
successful steeple to St. Clement Danes,
d, though he gave us in the church of St.
ry-le-Strand a very pleasing conception,
ecially in the steeple, the work is characterised
a smallness of scale and want of character
d vigour—qualities which are very marked
Wren's work. The later works of the
hteenth century are usually distinguished
the frequent use of the giant western portico
d the greater subordination of the steeple,
ile the "secularisation" of interior treat-
ent became more and more pronounced.
nbrugh and many of the later architects
re more lavish in the use of space, showing
ne of the careful economy and reserve which
tinguish the work of Wren. Had that
hitect been able to expend the ampler sum
ich a richer age placed at the disposal
its builders London would have gained
hitecturally; as it is, many of the later
rches suggest curious experiments in form
d a desire to create novelty regardless
the dictates of good taste. But, though
y fail to take the highest rank archi-
turally, they have great historical interest,
d form an intermediate stage between
at we may regard as the culmination of
e English Renaissance and the banalities
modern design.

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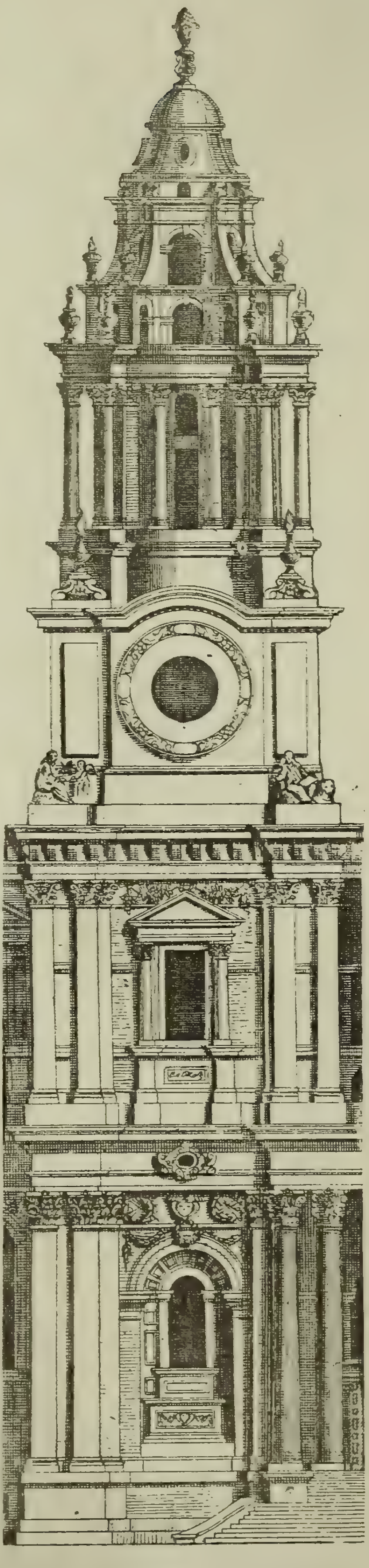
NEW CHURCH, GOLDTHORPE.

The church of St. John the Evangelist and
Mary, erected at Goldthorpe by Viscount
lifax, was consecrated a few days ago by
e Bishop of Sheffield. The church is con-
ucted of ferro-concrete, as is the presbytery,
ich communicates with the sanctuary by
ans of a covered corridor. The cost of the
eme was about £20,000. The architect
s Mr. A. Y. Nutt. An interesting feature
the interior is the baldachino, with its gilt
d black pillars supporting a canopy beneath
ich is suspended a crucifix in black. The
ations of the Cross are also an adornment of
e building.



The West Prospect of St. Paul's Cathedral.

(From Maitland's "London.")

PORTLAND CEMENT.

IN the last article dealing with this subject natural cements were discussed, and, by way of distinction, cements made by bringing together different raw materials are known as artificial cements. With the exception of certain special materials, such as slag cement and pozzuolana, which will be discussed subsequently, Portland cement is the only representative of this class of any importance, and transcends in its importance all other mortar-making materials. It is ninety-two years since our countryman Aspdin took out his patent for making cement from chalk and clay, and the development of this industry, which extends to all parts of the world, still continues. All natural materials vary in composition, but when separate raw products are used the composition of the resulting body is much more under control, hence the superiority of Portland over natural cements, which contain an excess of acid constituents, just as hydraulic limes contain an excess of basic constituents.

Chalk and clay—or limestone and shale, which will serve equally well for cement manufacture—are exceedingly cheap and accessible materials, and the comparatively high cost of Portland cement—apart from the question of trade combines—is due to the capital outlay required in the necessary plant for manufacture. Some idea of this outlay may be obtained when it is stated that it is not good finance to put down a plant unless at least 5,000,000 cubic ft. of material for every kiln erected is accessible.

Originally made in stationary kilns of the lime-kiln type, Portland cement is now prepared almost entirely in rotary continuous kilns and by the wet process, the two ingredients being ground up together in large machine-driven mills with water and the resulting "slurry" pumped into the kilns, where the first operation is the evaporation of the water. In rare instances the ingredients are ground and mixed in the dry state. The intermixture produced by the water is very complete; but not only does a heavy thermal loss result from the necessary evaporation of the water, but great outlay is involved in the construction and agitation of the enormous slurry ponds required to contain the liquid prior to its introduction into the kilns; and it is surprising that engineering developments have not led to a preliminary drying of the raw materials, followed by their attrition and intimate mixture and burning in a dry state to a larger extent than at present.

Deprived of water, the dry slurry loses carbon dioxide completely at 800 to 900 deg. C., and undergoes fusion further down the kiln (which is inclined from the horizontal) at a temperature of perhaps 1400 deg. C., which is well above the melting-point of cast-iron, after which the clinker is cooled and ground in ball mills.

The essential, and probably the only essential, ingredient in the manufactured cement, as in other hydraulic materials, which gives the strength on setting, is silicate of lime, and the proportions of lime and silica aimed at to give the best results are roughly three parts by weight of lime to one of silica. Since lime and silica are both readily obtainable, attempts have been made to prepare cement by their direct combination; but these have not been successful, for it is found that some fluxing agent is necessary to bring these bodies into combination. This is supplied in the shape of alumina, which is always present in clay to a considerable extent, and which itself forms an aluminate of lime, which is chiefly responsible for the initial set which all cements take before the main rigidity of the mass is developed. In practice, then, Portland cement is a mixture of silicates of lime and alumina, the amount of the latter, however, being small as compared with that in natural cements.

Owing to the rigid demands of users, the manufacture of Portland cement has been developed to conform to a very exacting series of tests, which form a reliable safeguard as to quality. These tests are fully described in the British standard specification for this material, and it is not proposed to discuss them in detail here, but one or two points in connection with them may be usefully considered.

The presence of sulphur in cement is often looked upon with suspicion, and in this connection it may be explained that sulphur in the chemical form of sulphate of lime is up to a certain amount a legitimate and indeed probably a beneficial and necessary ingredient. A small amount of sulphur in this form almost invariably occurs in the natural raw materials, and more is sometimes added, the effect of which is to retard the rate of setting. The British standard specification fixes 2·75 per cent. of sulphuric anhydride, SO_3, as representing the maximum amount of sulphur allowable, and, as the sulphur content is sometimes expressed in other ways, it may be useful to note that this amount represents 1·1 per cent. of actual sulphur, or 4·67 per cent. of lime sulphate, $CaSO_4$, which is the form in which this element chiefly occurs in cement.

Sulphur can, however, occur in a distinctly deleterious form as calcium sulphide, but, as such occurrence is very unlikely in Portland cement, reference to this matter may be reserved for discussion in connection with slag cements.

All cements after manufacture tend to absorb carbonic acid gas and moisture from the atmosphere, hence entire freedom from carbonate of lime, which is formed by such absorption, is hardly to be looked for. Easy evidence of carbonates is obtainable in any clerk of work's office by the bubbling produced when any acid, such as spirits of salt or even vinegar, is poured on the cement.

When long exposed to the air this formation of carbonate of lime proceeds sufficiently to seriously reduce the value of the material, and whether this has occurred may be roughly estimated by placing a little of a known fresh cement and of the sample to be tested in separate tumblers in equal quantity, say enough to just cover the bottom of each, adding to each simultaneously an equal quantity of diluted acid and noting whether the effervescence of the sample greatly exceeds that of the fresh material. This formation of carbonate and absorption of moisture will be evidenced by a lowering of the specific gravity of the cement, which for good material should be 3·10 to 3·15. This, it should be remembered, is not the weight of the powder relative to water as measured in a cube foot box—*i.e.*, of the dry powder, which is filled with air spaces—but the comparative weight of the air free particles, which is, of course, much greater. Even this cursory reference to tests must include some comment on the important question of expansion. All cements legitimately expand in setting, but a good cement will not show signs of disruption when set and heated for some hours in hot water. This can be readily ascertained by allowing a pat of neat cement about 3 in. across, made up on a piece of glass and shaped to resemble a slice off a large sphere, to set under a damp cloth, and then heating it in water just short of boiling-point for six hours. If this treatment does not detach the cement or produce cracks in the edges of the pat, the material may be used with confidence. The effect of heating gives an opportunity for defects to present themselves in a few hours which would take perhaps a year or more to develop in the cement as ordinarily used. If the cement possesses a proper chemical composition and is finely ground, troubles due to expansion after setting are not likely to arise.

Finally, a simple means of ascertaining whether useless inert matter, such as sand, exists in any sample may be cited. Pure Portland cement is entirely dissolved in diluted spirits of salt, in which such bodies as sand and ground furnace clinker are quite insoluble. Any residue left on treatment in this manner may therefore be confidently regarded as due to adulteration.

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FIRE IN OLD WESTMINSTER.

A fire, involving the internal ruin of one of the old Queen Anne houses, broke out in Westminster on Monday morning. The house in question stands at the entrance to North-street, one of the most picturesque and unspoiled relics of the early eighteenth century. Thanks to the prompt action of the fire brigade, the fire was rapidly overcome without loss of life or limb. The house is completely gutted.

ARTERIAL ROADS IN GREATER LONDON.

THE deliberations of the local authorities of Greater London upon the subject of the new arterial roads, proposed by the Traffic Branch of the Board of Trade, culminated in a final Conference on the 19th inst. at the Middlesex Guildhall, kindly lent by the Middlesex County Council for the occasion.

The chair was taken by Alderman N. Regester.

Mr. Hayes Fisher, who attended on behalf of the Local Government Board, said he was much impressed by the Report of the sectional conferences and the extraordinary unanimity of opinion it displayed; but he indicated that, in his opinion, any recommendation involving outlay by the Government must be long deferred. Nevertheless, he really thought we were getting appreciably nearer to the time when one central authority should control traffic and developments instead of the eighty local authorities and a Government department which now did so. He was sorry to see from the Report of the Retrenchment Committee that it recommended the abolition of the Traffic Branch of the Board of Trade, but he thought the Local Government Board would probably continue its work, and hoped in due course the duties of the Road Board would also be transferred to the same department.

In spite of the financial monster in the path, he did not despair, and agreed that much could be done by encouraging local authorities to prepare town-planning schemes; but he did not think that preliminary estimates, if made now, would be of much value by the time they were required.

The Chairman, in moving the adoption of the Report, expressed a hope that some means might be found of getting the new roads settled other than the procedure adopted for the Western-road through Parliament, which had proved very costly, and referred to Birmingham as an instance of settlement by co-operation between owners and authorities.

Several protests on minor disagreements as to the Committee's recommendations were received, but it was decided to refer them to the various Committees, who would continue their work, and that authority should not be given to pass the Report, which was then carried.

Mr. F. M. Elgood, Chairman of the Ruislip and Northwood District Council, then moved the following resolution:—

"That in view of the vital importance of securing the harmonious development of Greater London by carrying into effect carefully-considered schemes for the construction of new arterial roads, and more especially in view of the opportunity, which will be afforded by the construction of such roads, for the profitable employment of surplus labour in any period of unemployment which may arise after the war, this Conference, in submitting to the Prime Minister and the President of the Local Government Board the conclusions of the sectional conferences, desires respectfully to make the following suggestions:—

1. That all practicable steps should immediately be taken to induce local authorities to secure the reservation of the necessary land for such roads by the exercise of their powers under the Housing, Town Planning, etc., Act, 1909.

2. That in order to encourage and aid local authorities in thus exercising their town-planning powers—thereby securing that the projected roads shall be provided at a minimum of cost—the Government should, by means of co-operation between the various departments of State and the county authorities concerned, arrange that local authorities preparing town-planning schemes for their respective areas and including in these schemes the projected arterial roads shall be given a guarantee that a considerable proportion of the cost shall be borne by the central authority."

The resolution in its original form defined the proportion more fully, but it was felt that a general guarantee in this form would sufficiently reassure owners to induce them to co-operate without fear of heavy charges.

Mr. Elgood said the prime object of the resolution was to prevent the possibility of the scheme generally agreed being defeated for want of proper precautions, and pointe out that as matters stood owners of land wer afraid to take an interest in town-plannin schemes for fear of heavy liability for roads, etc of far greater widths than were required fo merely local purposes.

Mr. H. Aldridge supported, and said everyon wanted to know exactly where they wer Alderman Crow proposed referring the whol matter to a finance committee.

Another speaker showed that the Wester avenue was costing £100,000 a mile, and tha the 113 miles of new road proposed woul probably cost much more, thus involvin expenditure of at least £12,000,000 and further £170,000 a year for maintenance, an thought the poverty and high rates of intere of the next fifteen years would prohibit suc work. On the other hand, he did not see tha land-owners could be expected to defer develop ment of their land until such measures wer possible. The usual provision in most Ac was three or five years.

Mr. Hayes Fisher advocated a wide an general guarantee which would leave the doo open for negotiation in every direction.

The resolution was then carried.

Sir Aston Webb, K.C.V.O., then moved th following resolution:—

"That having regard, not merely to th large amount of time and trouble that has bee expended in the consideration and selectio of suitable routes for arterial roads in Great London, but to the extreme urgency of preserv ing the opportunity for creating the arteria roads which have been found by these confer ences to be necessary, and to the importan part these traffic avenues will play in the futur development and growth of the Metropoli this Conference is desirous of recording i opinion that it is imperative that steps shoul be immediately taken through the Loca Government Board or other authority t secure the routes of such new or improve thoroughfares as are set forth in the importan traffic proposals contained in the Report o the Conference on Arterial Roads in Great London."

In doing so he recalled the assurances give by the Prime Minister when he received th first deputation that the establishment of central authority would be considered, an hoped that the great success of the conferenc would show that this was the thing most neede to ensure the realisation of the proposals upo which so much valuable work had been don Already there were development scheme which imperilled some of the most importan proposals, and no time, therefore, should b lost. He did not support the lugubriou prophecies as to the paralysis of developmen after the war, but reminded the Conferenc of the great works carried out in London jus after the Napoleonic War.

Sir Alexander Stenning supported th resolution. He thought Parliamentary proc dure the only way, and urged that power be sought in the next session which woul secure all the routes agreed on.

Mr. Randolph Glen drafted a resolution i favour of giving county councils power to fi building lines in order to enable them to loo ahead and avoid the waste incurred by widen ings after developments had taken place but at the request of the Chairman it was with drawn, as it was thought that the questio might be dealt with by the Committee whic the Conference appointed to continue th investigations. The same Committee wa authorised to send a deputation to lay thei Report before the Prime Minister as early a possible.

The proceedings terminated with a vot of thanks to the Chairman and to the Middlese County Council.

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SCHOOL OF ARCHITECTURE, UNIVERSITY OF LIVERPOOL.

The new officers of the Students' Unio Architectural Society of the University o Liverpool for the forthcoming year are:— President, Mr. Gordon Hemm; Secretary, Mr A. C. Holliday; Treasurer, Mr. T. Medina The purpose of this Society is the advancemen of the fine arts.

CORRESPONDENCE.

The Wonder of Work.

IR,—I do not quite follow Mr. Rickards, admits he has been following me for rs. That is very complimentary, and I nk him for referring to my "journalistic poses," for if trying to take an interest and trying to show the wonder of, the modern ld, the world about us is "journalistic," then greatest artists of the past were the greatest nalists; but mostly in art to day, unless artist colours photographs, harks back to a od he never knew, or perpetrates futurities onceal his incompetency, he is of no account he critic. Yet art is all about us and the is nearest to us—the art of our age, the nder of Work. But most artists are blind, as you architects call yourselves artists, ar your case is very much the same as that he painters and sculptors.

r. Rickards says that "architecture does exist to be exploited by the modern pictorial t." Well, from the earliest times architec-, if worth anything, has been exploited pictorial artists, and now architects are nxious to be exploited that they draw nselves, or get a "pictorial artist" to for them, or exploit themselves by ography. "The pictorial artists of my " do roam the world, not only to get rial, but to get some idea of what is being in the world, what has been done, and arn what is worth doing. If Mr. Rickards rds the work of to-day as "sensational," enormities," as "Brobdingnagian," Mr. ards has lines of superlatives; but, if you to think of it, the same adjectives have addressed to the Ark, the Tower of Babel, the Parthenon, and to-day they are fired e Woolworth Building and the gasometers erlin. Yet these will be the architectural ds of the age. Mr. Rickards tells me that le are "on the average less than 6 ft." therefore they do not want "enormous iors"; but the number of people wanting e accommodated in interiors of buildings so increased that everywhere but here esign has increased, the scale has increased, thing has increased to meet modern needs ot British architecture. And Mr. Leaning ly states the case, though he uses my s to do so. Engineers are the great s, especially in the Forth Bridge, the hester Ship Canal—and I don't remember ing else—these are the only works of rn art in Britain. And I prefer, as Turner Ruskin had to swallow it, a railway viaduct ing a landscape to a tame landscape with ame deer cooped up in it.

d not "the Whistlerites" continually aimed the beauty, the character of the to-day, had they not made the world t, why, as Whistler himself said, "The Briton would not even have been painted"

e great thing is to carry on tradition—radition of great art—and it is the great eers who to-day are doing so. Here there an architect is working with them, g down and slicking up, but it is the eers who are creating the Wonders of in the world to-day, and the most erful thing about it all is that the average tect does not know anything about it.

JOSEPH PENNELL.

Charing Cross Railway Bridge.

,—Whatever may be the fate of the -Eastern and Chatham Railway Bill, before the House of Lords, it will have amply proved that there is an over-ning case for its defeat. It is a matter satisfaction that a precedent has been ed by the House of Lords for hearing t evidence from the R.I.B.A. and the on Society on a matter which they are ecially qualified to judge. The issue is ubtedly a very serious one, for if the iple be conceded that the practical and ic interests of London are to take prece- of isolated projects, a most valuable asset ave been gained towards the right develop- of London. The aims of reformers are st always misjudged and misrepresented, t is therefore necessary to keep constantly in clear view the aims of such a body as the London Society. Its chief aim is to obtain forethought and consideration from a wide and generous point of view of the growth and development of London. It does not aim to formulate or dictate schemes for this or to usurp the proper authority of any other body. It does not aim to assist in the destruction of anything in or of London which is worthy to remain, and it certainly does not aim at schemes of wild and extravagant expenditure. If only the citizens and authorities of London really understand the aims of the Society they must support it in every possible way. All the forces which help to govern and improve London are represented in its ranks, and these have never been so completely in agreement on any one point of its policy as the insistence on a postponement of the Charing Cross Railway Bill until the whole development of the bridges, the roadways, and the amenities of this centre of London has been carefully considered. Now is surely the worst time of all which could possibly have been selected to create such a serious barrier to the well-being of London as the railway company project.

T. RAFFLES DAVISON.

OBITUARY.

Mr. E. A. Heffer.

We regret to record the death of Mr. Edward Arthur Heffer, which occurred at Norwich on April 3. Deceased was born in London on May 5, 1836, and was the son of Edward Heffer, picture-dealer and gilder, well known amongst artists. After receiving a private education, he entered the Government Head School of Design at Somerset House when he was fourteen years of age, and studied there under Mr. Richard Burchett and the visiting masters—Mr. J. H. Herbert, R.A., and Mr. Richard Redgrave, R.A. He remained there two years, and was awarded in 1852 the National Medal for Linear Perspective; also he took the first prize for Chalk Drawing and for Practical Geometry. After spending some months in sketching from Nature in the neighbourhood of Hampstead he was introduced to Mr. John Thomas, sculptor of the New Palace, Westminster, and architect of Somerleyton Hall, Suffolk, and numerous other buildings. After being with Mr. Thomas for four years, at the age of twenty-one he went to Liverpool, where he began practice as an architect and designer of ornamental and decorative work. He designed the National School and Public Offices at Wavertree; a school at Walton-on-the-Hill; a warehouse in South Castle-street, Liverpool; the Mayer Lecture Hall and Art Gallery and the Free Library at Bebington, Cheshire; and Pennant House at Bebington, and various residences in the neighbourhood of Liverpool. His chief work, however, which occupied four years, was the church of St. Bridget at Wavertree. The church was fully illustrated by wood engravings drawn by the architect and published in the *Builder* in July, 1871. Deceased returned to London in 1875, and carried out works at Hampstead and Kilburn. The Red Tower; Messrs. Phillips & Page's music warehouse; Mr. Stuart's shop in the High-road; the Queen's Park Hall, Kilburn; various shops and villas in West End-lane; and the Emmanuel Boys' School at West End-green were designed by him. In 1875 deceased made a design for a cathedral to be built on the site of St. Peter's Church, Liverpool and read a paper on the subject before the Historic Society of Liverpool. When, after some years, the competition was organised, he submitted a design for the cathedral on St. James's Mount and made a model of it, which was exhibited at the Walker Art Gallery at Liverpool and much approved. In 1892 Mr. Heffer removed to Norwich, and carried out several hotels and other works. Deceased found time to enter over seventy competitions, and gained several premiums. Among others, he gained the premium offered for a design for the Albert Memorial Clock Tower at Hastings, and was entrusted with the work of building it. He also obtained the premium of 100 guineas for his design for the improvement of the White Rock-parade at Hastings and 50 guineas for his design for the Town Hall. In Hastings, too, he built Tudor House for the late Alderman Ross. At the age of nineteen he exhibited at the Royal Academy, and again in subsequent years his work was to be found there. Illustrations of his buildings have appeared in the *Builder*. Apart from architecture, he designed domestic and church furniture, plate, clocks, and many other things incidental to his profession. Like most architects, he was fond of music. He painted, too, in water-colour, doing many works both in landscape and figure. He also painted in oils.

NEW GOVERNMENT CONTRACTS.

War Office.

Barrows.—Davey & Armitage, Elmer-avenue, Southend-on-Sea; J. Edwards & Son, Inkpen, Hungerford.

Boards and Trestles.—Parnall & Sons, 44/5, Broadmead, Bristol.

Bolts and Nuts.—Bayliss, Jones, & Bayliss, Ltd., Wolverhampton; Burton, Delingpole, & Co., Moseley-street, Birmingham; F. W. Cotterill, Ltd., Atlas Works, Darlaston; J. Gadd & Sons, Ltd., Blackheath, Birmingham; Guest, Keen, & Nettlefolds, Ltd., London Works, near Birmingham; Horton & Son, Ltd., New Alma Works, Darlaston; Lindley & Co., Ltd., Beauvoir Works, Luddenden, Yorks; W. Miller & Sons, Ltd., Monmore Green, Wolverhampton; Nuts and Bolts (Darlaston), Ltd., Foster-street, Darlaston; Steel Nut and Joseph Hampton, Ltd., Wednesbury; J. Wiley & Sons, Ltd., Eagle Works, Darlaston; Willetts Bros., Old Hill, Staffs.

Cranes, Electric.—Babcock & Wilcox, Ltd., Renfrew

Endless Chain Haulage Gear.—Wantage Engineering Company, Ltd., Wantage, Berks.

Granite Road Metal.—J. Mowlem & Co., Grosvenor Wharf, S.W.

Paint.—James & Co., Ltd., Ouseburn Lead Works, Newcastle-on-Tyne; Locke, Lancaster, and W. W. & R. Johnson & Sons, Ltd., 306, Burdett-road, E.; Mersey White Lead Company, Ltd., Warrington; Pinchin, Johnson, & Co., Ltd., Pinchin's Wharf, Silvertown, E.

Pumps.—Beck & Co., Ltd., 130, Great Suffolk-street, Southwark, S.E.; Holman Bros., Ltd., Cambourne, Cornwall; Lee, Howl, & Co., Ltd., Tipton, Staffs; J. Tylor & Sons, Ltd., Belle Isle, York-road, N.

Ranges, Stoves, etc.—Albion Iron Company (London), Ltd., Belper; Callender Iron Company, Ltd., Falkirk, Stirlingshire; Carron Company, Carron, Stirlingshire; Dobbie, Forbes, & Co., Larbert, Stirlingshire; Forth & Clyde and Sunnyside Iron Company, Ltd., Falkirk; Stirlingshire Iron and Stove Company, Ltd., Bonnyside Foundry, Bonnybridge, Stirlingshire.

Roofing Felt.—D. Anderson & Son, Ltd., Roach-road Works, Old Ford, E.; Graves & Co., Ltd., Waterford; F. McNeill & Co., Kirkintilloch, Glasgow, etc.

Steel, Constructional.—The Aston Construction Company, Ltd., Eagle Wharf-road, Hoxton, N.

Tanks.—G. Adlam & Sons, Ltd., Bristol; Baldwins, Ltd., 35, Orchard-place, Blackwall, E.; F. Braby & Co., Ltd., Ida Works, Deptford, S.E.; Braithwaite & Kirk, 15, Henry-street, West Bromwich; Davies Bros. & Co., Ltd., Crown Works, Wolverhampton; T. Fildes, Thornton-street, Manchester; John Lysaght, Ltd., Bristol; Midland Tank and Ironplate Company, 241/3, Heneage-street, Birmingham; T. Piggott & Co., Ltd., Atlas Works, Springhill, Birmingham.

Works Services.—Drainage at Canterbury: Geo. Browning, St. George's-place, Canterbury; drainage at Ipswich: Cubitt & Gott, Westerfield, Ipswich; sewage disposal works at Arborfield Cross: E. C. Hughes, Albion Works, Wokingham.

Erection of—A.O.D. stores at Burscough: J. Booth & Sons, Hulton Steelworks, Bolton; buildings at Edinburgh: W. McNiven & Sons, 1, Yeamen-lane, Edinburgh: buildings at South Farnborough: Wm. Harbrow, Ltd., South Bermondsey, S.E.; buildings at Turnhouse: Watson & Sons, 53, Caledonian-road, Perth: entrance offices at South Farnborough; Wm. Harbrow, Ltd., South Bermondsey, S.E.: offices at South Farnborough: Wm. Harbrow, Ltd., South Bermondsey, S.E.: platform retaining walls at Hilsea: Jno. Croad, Portland-street, Portsea; sheds at Woodbridge: Wm. Harbrow, Ltd., South Bermondsey, S.E.; stores at Newhaven: A. Roberts & Co., Ltd., 74, Earl's Court-road, S.W.; temporary structure at Altcar: F. R. Hipperson, Northumberland-street, Norwich; provision of concrete floors to stables at Shirehampton: Geo. Pollard & Co., Ltd., Taunton.

LAW REPORTS.

OFFICIAL REFEREE'S COURT
(Before Mr. POLLOCK.)

Spencer, Santo, & Co., Ltd. v. The Commissioners of H.M. Works and Public Buildings.

ON the hearing of this case being resumed,*

Mr. Holman Gregory, continuing his opening, said he would not dispute the fact that the architect, in reason, was entitled to make omissions, but it was for the Referee to say whether the omissions made had or had not altered the character of the work which the builders had contracted to carry out. The defendants contracted with the plaintiffs for them to do certain work which was to cost £473,000, to include all labour and general charges, and if the defendants called upon plaintiffs to do other work and abandoned part of the contract the plaintiffs were entitled to extra payment for the other work and for any loss of profit which might have been made from the work abandoned. As to the stone supplied for the work, counsel said that it was not of the quality which it should have been according to the contract. A large quantity of it was wholly wasted owing to its bad quality, some of the blocks being full of black flint and sand shells. Condemnations of the stone were constant throughout the execution of the work, and much of it was rejected by the clerk of the works after it had been worked in the stoneyard.

Mr. P. H. Patten, the foreman engaged on the job throughout, in the course of his evidence said that before the contract was signed he commenced to lay-out the work, and the building was actually commenced in the earlier part of March. At that time he had no knowledge of the revisions which were going to be made. From time to time the plans were revised and variations made by the architect. Generally speaking, the building erected was skinned of everything that could be taken away from it. It was made more costly, and was nothing like the building as originally designed. Orders were given continually for alterations in work after the work had been done. The elevation was practically the same in appearance, but the details were altered and made less uniform. As to the brickwork, the walls were reduced in thickness to the extent of about 4½ in.

The witness was subsequently examined upon minute details of the work which had not been done, by direction of the architect, upon which the plaintiffs would have made profit, and the amount of profit which would have been so made had the contract been carried out in accordance with the original drawings. On the question relating to extra work and omission, he said that the contract related to the construction of three towers, two of which were omitted, with the result that the plaintiffs had lost on the amount of brickwork involved. There were also omissions in the sub-basement resulting in a diminution in the brickwork to the extent of 20,000 ft. super. This was the cheapest part of the work, and went to make up the average upon which the contract was based. It was cheaper because, being on the lower level, no hoisting was required. Another item which went to make up the plaintiffs' claim was the variations which had been made in the height of some of the brickwork, for which plaintiffs were entitled to make a charge beyond the contract price.

There were numerous alterations in the windows which increased the cost of labour, and the smaller quantity of masonry in parts, consequent upon the altered plans, involved quite as much cost for labour, while at the same time it reduced the plaintiffs' profits. In some cases there was more labour expended upon the smaller quantities than there would have been upon the larger. In the original drawings there were fifty-one chimney-stacks shown, twenty-eight to be built in stone and twenty-three in brick. The stone stacks were to contain originally 612 cubic ft. of stone, but under the altered plans they contained only 296 ft., and owing to the altered character of the work and the smaller blocks used more labour had to be expended upon the smaller than would have been expended upon the larger. There were many other alterations and variations of the plans both in the structure and the internal arrangements from the basement to the roof, including the drainage, which involved a large amount of extra cost upon the plaintiffs and caused delay.

Cross-examined by Mr. Acland, K.C., the witness admitted that the terms of the contract gave the architect for the Office of Works power to vary the plans or to give part of the work to other contractors if he thought fit. As to the brickwork, he said that that omitted increased the cost of labour in proportion, and reduced the profit accordingly. If the estimator had known that certain concrete work was going to be omitted he would not have put a different figure down. By taking away the concrete work the unit of value had been disturbed, and he maintained that the contractor was entitled to the whole amount for which he had contracted. The omission in the concrete work amounted to 175 yds. out of a total of 13,000 yds.

Sir R. Acland: If the estimator had known that the omission was going to be made would he have put a different price on it?

Witness: I do not say that he would have done so; but it disturbed the whole thing.

In further cross-examination the witness said that the contractor had been put to greater expense in consequence of the alterations and omissions.

Mr. Patten during his subsequent cross-examination, after having been eight and a half days in the box, was unable, owing to the constant strain to which he had been subjected, to continue his evidence, and it was arranged that his further examination should be postponed and other evidence interposed.

Mr. F. Durrant, the managing director of the plaintiff company, was accordingly called and examined by Mr. Compston, K.C., as to the various payments made during the progress of the work upon the architect's certificates and the value of the work remaining to be done at various periods when such payments were made.

The case was proceeding when we went to press.

Claim by a Builder.

ON Tuesday, May 9, in the West London County Court, before his Honour Sir W. Lucius Selfe, Albert Johns Sullivan, builder, Hogarth-road, Earl's Court, sued Mr. and Mrs. Holdenstone, 93, Warwick-road, Earl's Court, for £18 11s., the balance of an account for work done.

Mr. Ernest Williams (instructed by Messrs. Gill, Ryle, & Davey, for the plaintiff) informed his Honour that plaintiff had given a verbal estimate for the alteration of the drainage at 93, Warwick-road—which the male defendant had purchased in the summer of 1915—in order to satisfy the requirements of the sanitary authority. Two estimates were given, one of £23 and a second of £12 4s., which were accepted, and there were smaller items ordered subsequently which totalled £35. In the course of the operations it was found that a new manhole which had been proposed would not be required, and that the original one if repaired would meet all that was needed. The estimate for this was £15, and there were other items, bringing the total up to £53 4s. Defendant had paid £35, and in December declined to pay more, alleging that he had disbursed the whole sum contracted for.

Plaintiff, in his evidence, said that on July 1, 1915, he was called in to estimate for this work by Mr. Matthews, of Messrs. Matthews & Chester, house agents and surveyors. He looked over the job, and his original quotation was £24 5s. Some difficulty arose as to a manhole; he had estimated for a new manhole at £8 10s., but the sanitary inspector discovered the old one, which he said would suit if repaired. His estimate for this was £15, and that amount was agreed by the male defendant; £35 had been paid on account up to December last. While the work was in progress Mrs. Holdenstone was frequently present, and on one occasion said the work was being done for her, as the house was her property.

Answering Mr. Sanderson (for the defendants), plaintiff said the surface of the ground had been opened by another builder and the drains exposed before he was called in by Mr. Matthews, and on the occasion when he received the job and gave his estimate only the male defendant and Mr. Matthews were present.

Mr. Sanderson: I suggest that from start to finish Mrs. Holdenstone was not present and never gave you any order?

Plaintiff: She was there when the work was ordered, and constantly while it was going on. She said she had employed other people, but they had been sent away.

James C. Matthews, estate agent, said he had sold this house to Mr. Holdenstone, who paid him the price. It was found necessary to have the drains attended to, and Mr. Traies, Notting Hill, was first employed in the work, his estimate being £22. Some differences arose as to branch drains, and plaintiff was called in, and he estimated the work at £23. It was af wards that the repair of the old manhole substituted for the construction of a new on £8 10s., which brought the estimate up to The other small items charged in the plainti account were reasonable, and the £1 10s. plans sent to the sanitary authority was than the usual £2 2s. allowed for that item.

Mr. Fleming, assistant sanitary inspec Kensington, also spoke to the necessity the change as to the manhole and reasonableness of the plaintiff's extra charg

Defendant, a consulting engineer, said he bought this house as a present to his wife his own money, and it was absolutely all had. Plaintiff's estimate was made verba and was for £35, to include the manhole. told plaintiff that what alterations w necessary must be done at low rates, as (defendant) could not afford big prices. Plai replied: "I'll make it as reasonable a possibly can for you. If I have a little mo from time to time I can get my mater cheaper for cash, and it will be to your ben say, £34 to £35." This was to include ev thing. He was not aware of the amount had paid plaintiff till December, when the b returned his cheques, and when he found had paid £35 he declined to pay more, as considered he had disbursed the whole amo of the estimate.

His Honour: There will be judgment aga the husband for £18 11s. and costs.

Claim for Surveyors' Fees.

IN the Marylebone County Court recently issue as to what was a "retainer" was rai in an action for 10 guineas, fees of a survey brought by Messrs. Flood Brothers, est agents and surveyors, 8, Westbourne-grove, against Mrs. Frances French, Spencer Ho Queen's-gardens, Lancaster-gate, W.

The facts stated to the Court were that the summer of 1914 the Oxone Shoe Compa who held the lease of certain shops at 19, We bourne-grove, desired to vacate the premi Defendant was approached by the plaintiffs, she agreed to take up the remainder of lease term at a reduced rent. This portion the transaction being completed in an intervi Mr. E. Farman, plaintiffs' manager, sugges that she would be desirous of steps being ta to have the rateable value reduced. suggestion appeared to Mr. Farman to c mend itself to the defendant, and under impression the firm wrote her on August 28 "As soon as the leases are exchanged you no doubt take steps to have the rating adjus We appreciate that there is a possibility getting the rateable value reduced, and shall be happy to act for you in the matte To that letter there was no answer. September 4 Mr. Farman had occasion to Mrs. French on matters relating to insuran and they afterwards discussed the steps to taken to obtain the desired reduction of assessment. With this view it was stated to defendant that the lease of the premises m be produced to the Assessment Committee. that she authorised Mr. Thornton, her solicit to hand the lease to the plaintiffs, and this done. Mr. Farman attended before the As ment Committee on October 5, and, supporti the lease with the special knowledge he had property in the neighbourhood, succeeded getting a reduction of the rateable value fr £330 to £260. Then an account for servi rendered was sent to the defendant, w disputed the 10 guineas charge as too high.

Mr. Farman gave evidence as to these fa and stated that, according to the Institute sca the plaintiffs could have charged 16 guineas.

His Honour: That scale does not apply this class of business.

Stating her case, the defendant said that gave no instructions to the plaintiff firm appear for her, and she admitted writing to plaintiffs that, "being a woman, I thought would undertake this business out of kindnes and she repeated that now. She denied th she had in any interview given them a retaine

His Honour held that the plaintiffs, bein professional firm, could not be assumed to acting from philanthropic motives. Defend must have understood. He held that plaintiffs were to act for her before the Asse ment Committee, and he doubted not but she was gratified at having the rateable va of the premises reduced. In these circu stances his Honour held that what she h acquiesced in and had done in fortifying plaintiffs' position by supplying them with lease amounted to a retainer. He ruled th the Institute scale of fees did not apply he and awarded them 7 guineas.

Judgment was entered for that amount, w costs.

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* See our last issue, page 368.

ENERAL NEWS.

Town-Planning Schemes.

epresentatives of various Scottish munici- ties met in Edinburgh City Chambers ntly and discussed Craigentinny town- ning scheme with members of the Town nning Committee of Edinburgh Town Council a view to the probable adoption of a lar scheme in their own districts.

he Henry Saxon Snell Prize, the Royal Sanitary Institute.

ne subject given in 1915 for the essay in competition for this prize was "Suggestions mprovements in the Sanitary Arrangements Appliances suitable on Board Ship for (*a*) engers and Crew, (*b*) Cattle and other Live k." Seven essays were sent in, and they been brought under the consideration of Council. The adjudicators for the competi- were Messrs. W. Collingridge, M.A., M.D., 3, A. Wellesley Harris, M.R.C.S., the late bert Williams, M.D., and J. J. Welch, M.Sc., ist.C.E., M.I.N.A., Professor of Naval nitecture, Armstrong College (University Durham), nominated by the Institution Naval Architects. Acting upon the advice ne adjudicators, the Council have awarded prize offered of 50 guineas and the silver al of the Institute to Mr. Wm. Hanna, M.A., .. Assistant Port Medical Officer, Liverpool, ing under the motto "Nautilus."

Architects and Military Service.

number of members of the Royal Institute British Architects who are about to enlist ne Army or to be summoned to the Colours er the operation of the Military Service have called the attention of the Council the desirability of making arrangements nable them to enlist in a selected corps, so they will have the advantage of serving a number of men of their own class and ession. With the approval of the Central uiting Depot, arrangements have accord- been made with the Queen's Westminster es. Applicants must, of course, be fit for ral service and must be capable of passing tests imposed by the regiment. Any nbers (whether attested or unattested) desire to take advantage of this opportunity ld apply immediately to the Officer Com- ding. Administrative Centre, Queen's tminster Rifles, 58, Buckingham-gate, S.W. are invited to call on any week-day ept Saturday) at 2 p.m., and they should e that they desire to take advantage of arrangements made with the Royal Institute British Architects.

Ancient Stained Glass.

the *Times* of Monday the following er by Mr. Thackeray Turner, Chairman of nmittee of the Society for the Protection Ancient Buildings, appears :—

SIR,—This Society has received so many iiries as to how ancient stained glass should protected from the risk of bombs dropped aircraft that it hopes you will be willing allow it to state briefly its views. From direct action of splinters it is thought that only protection is to remove the glass and it in a vault. But there is no doubt that dows run a risk of destruction from air ssure due to explosion at a distance, and thought that a screen of ¾ in. of rough board- standing in front of the window would in ny cases save the glass. Where there are tresses on either side of a window, the rding might be fixed on the face of them. other cases, where the windows light the und floor, the screen might be fixed to fold poles, and, of course, if the expense wo thicknesses of boarding with an air space ween them were allowed, the protection ld be still greater. In many cases the glass be sufficiently far back from the face of wall to be protected by fixing wood uprights inst the wall on either side to carry the rding. It is thought that covering the dows over in this way would be a cheap thod of providing a reasonable protection inst air pressure, but it certainly would not a complete protection."

The Leicester Galleries.

An exhibition of recent portrait drawings by Mr. Will Rothenstein was opened on Wednesday at the Leicester Galleries, Leicester-square.

Street-Watering.

In the House of Commons on Monday Mr. Long, replying to Sir R. Baring, said he had seen references in the Press to a proposal of certain Metropolitan Borough Councils to abandon street-watering during the coming summer, and would cause some inquiry to be made into the matter. His advisers would not endorse a policy which involved such a stoppage, but they would probably agree that there were cases where the amount of watering done in ordinary times might be reduced without risk. He had not heard of the abandonment of street-watering by provincial authorities.

The Reconstruction of Sackville-Street, Dublin.

A representative Conference has been held at the Mansion House, Dublin, under the presidency of the Lord Mayor. Amongst others present were the principal officials of the Corporation, representatives of the Local Government Board, the Chamber of Commerce, the Royal Institute of the Architects of Ireland, the Architectural Association of Ireland, and the Housing and Town Planning Association of Ireland. The Conference considered a Memorandum submitted by the Lord Mayor suggesting that the Government should take such immediate action as would prevent the rebuilding of destroyed premises without reference to a general improvement scheme. The decision of the Conference was at once conveyed to the Local Government Board for transmission to the Prime Minister. The Lord Mayor subsequently had a conference with the Prime Minister, at which the Prime Minister expressed his desire to provide every necessary facility without delay. The powers sought, if approved by Parliament, will enable the Corporation and the public departments concerned to meet the present emergency rapidly and effectively.

The Royal Institute of the Architects of Ireland.

At a meeting of the Council of the Royal Institute of the Architects of Ireland, held to consider the conditions which would affect the rebuilding of the destroyed premises or areas in the City of Dublin arising out of the recent rebellion, the following resolution was adopted :—

"His Majesty's Government having indicated its intention of taking steps to facilitate the restoration of the destroyed buildings in Dublin by proposing to assume, as the maximum of its grant, the same liability as would have fallen on the insurance companies had their policies covered loss arising out of the rebellion, the Council of the Royal Institute of the Architects of Ireland would urge on the Government the desirability in making these *ex gratiâ* grants of imposing conditions or restrictions with regard to the design and reconstruction of individual buildings in important thoroughfares such as Sackville-street, Eden-quay, Abbey-street, Earl-street, and Henry-street, so that they shall conform to some general scheme of street improvement. The Council would emphasise the necessity of imposing such restrictions, inasmuch as the Municipal Council has no control over the design of new buildings other than as regards their street alignment, sanitary fitness, and the fulfilment of certain conditions in regard to construction. The Council would urge on the Government the advisability of attaching such conditions to these grants so as to ensure that public money should be expended in the interests of property owners and the enhancement of the architectural dignity of the city. To achieve this object the Council of the Institute would respectfully suggest that a Commission be appointed to control the conditions subject to which designs for new buildings would be sanctioned. Control should be exercised in such matters, among others, as general street improvement, harmony and symmetry in the design of new buildings, and the settlement of questions in regard to right of light, party walls, etc."

Deceased Architect's Estate.

The late Mr. James Gillespie, of 4, Queen-street, St. Andrews, a member of the firm of Messrs. James Gillespie & Scott, architects and surveyors, left, in addition to real estate of considerable value, personal estate valued at £11,239.

The Australian Capital.

It is reported that the Commonwealth Government has appointed a Royal Commission to investigate charges of blundering in connection with the works of the new federal capital (Canberra). The Senate has debated a motion to rename the Federal capital Anzac. The change of name was opposed by the Government and the debate was adjourned.

House-Building.

Presiding at the annual meeting of the Sheffield Property Owners' Protection Association in the Builders' Exchange, Mr. James Morrison gave some figures showing the decrease during recent years, even before the war, of the erection of property in Sheffield. He said that in the period 1901-5 new houses certified for occupation numbered 2,000; from 1906 to 1910 they were 1,629; and then in the period 1911-15 there was a decrease to 615. In 1913, the year before the war, they numbered 542, thus showing that the decrease had nothing to do with the war; in 1914 the number was 570, and last year 399.

The Late Mr. R. A. Briggs.

We regret to announce the death of Mr. Robert Alexander Briggs, which occurred in London on May 10. Deceased was articled at the age of eighteen to Mr. G. R. Redgrave, of Broadway-chambers, Westminster, for three years. From 1879-83 he was assistant in the offices successively of Mr. G. Moreing, Messrs. Isaacs & Florence, Mr. E. C. Lee, and Mr. J. J. O'Callaghan (Dublin). In 1883 he was awarded the Soane Medallion and £50 for a design for an Academy of Music. He started practice in 1884. He was elected Associate of the Institute of Architects in 1882 and Fellow in 1892.

War-Time Restrictions on Art.

Queen Alexandra paid a visit to the Royal Amateur Art Society's exhibition, at 25, Park-lane, on Tuesday. Sir Ernest George, A.R.A., in an address, said he might be regarded as old-fashioned if he insisted on the first importance of drawing. There was often the temptation to break out in colour and to talk of "tone values" before the elementary knowledge of drawing was acquired. In the search for novelty for its own sake pretentious nonsense too often obtained a hearing. Be it "Cubist" or other folly, it found its votaries. The attempt to bring in a "new art" was too often made by those who had not learned the grammar of the old; who thought to avoid serious study and the drudgery of taking pains.

Air-Craft Insurance.

The Council of the Surveyors' Institution desire to remind members of the need for precision in defining the property which it is desired to insure and the risks which are to be covered in connection with the Government Insurance Scheme. "In the majority of cases," the Council state, "air-craft insurances have been effected through the agency of the insurance companies in whose offices the property concerned is insured against fire, and the description of the property and of the risks insured against contained in the fire policy have been followed. The terms of a Government scheme are necessarily the subject of a stricter interpretation and a closer audit than is always enforced by an ordinary insurance company competing against others for the favour of the public, and the War Risks Insurance Committee have decided that they cannot accept liability for the payment of professional fees in respect of services in connection with reinstatement unless specially insured by a separate item, nor for the cost of reinstating boundary walls, fences, paving, etc., unless definitely included in the policy. When existing fire policies have been followed this can be done by an endorsement slip attached to the policy, and members desirous of including other matters within the insurance are recommended to take that course."

Leading Contents.

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ILLUSTRATIONS.

Two Lithograph Drawings.

THE "Baroque Madonna" in a church in Venice and the "Bridge to Peace" are from two lithographs produced by Mr. E. A. Rickards as posters, and are interesting examples of his well-known methods of draughtsmanship.

Campanile, St. Paul's.

Mr. Norton's admirable outline drawing gives a clear idea of the manner in which these great features which add so much to the beauty of Wren's cathedral are built up. We refer to them in an article on page 381.

Houses in the North of England.

We give illustrations of two houses designed by Mr. Edward Cratney, the planning and design of which are very architectural and pleasing.

"Montmartre" and "Design for Drop Scene."

These two illustrations are from the very excellent etchings included in the collection recently on view at the Suffolk-street Galleries by members of the Italian Society of Etchers and Engravers. The decorative character of Cesare Fratino's drop scene is admirable, and the rich baroque feeling and suggestion contained in it will prove suggestive to many of our designers. The etching of Montmartre, by Anselmo Bucci, gives the character of that quaint corner of Bohemia, and would make a fitting background to Murger's "Scènes de la Vie Bohème." The work of the Italian Society is unusually full of vigour and character.

Ward End Church.

This church is erected to serve the wants of a poor district. We gave two views in our Academy issue of May 5, in which will be found a description of the work, which is conceived in a very original and interesting manner.

◆

MEETINGS.

Monday, May 29.

Surveyors' Institution. — Annual general meeting. 5 p.m.

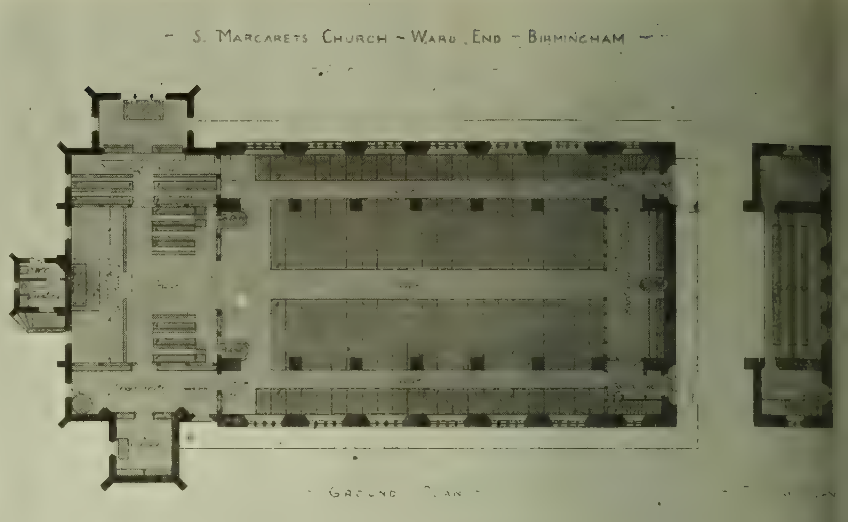
Thursday, June 1.

Royal Society of Arts.—Professor Wyndham R. Dunstan on "The Work of the Imperial Institute for India." 4.30 p.m.

◆

BOOK RECEIVED.

A Text-Book of Geology: Part I.—Physical Geology. By Louis V. Pirsson. (London: Chapman & Hall, Ltd. 10s. net; New York: Jno. Wiley & Sons.)



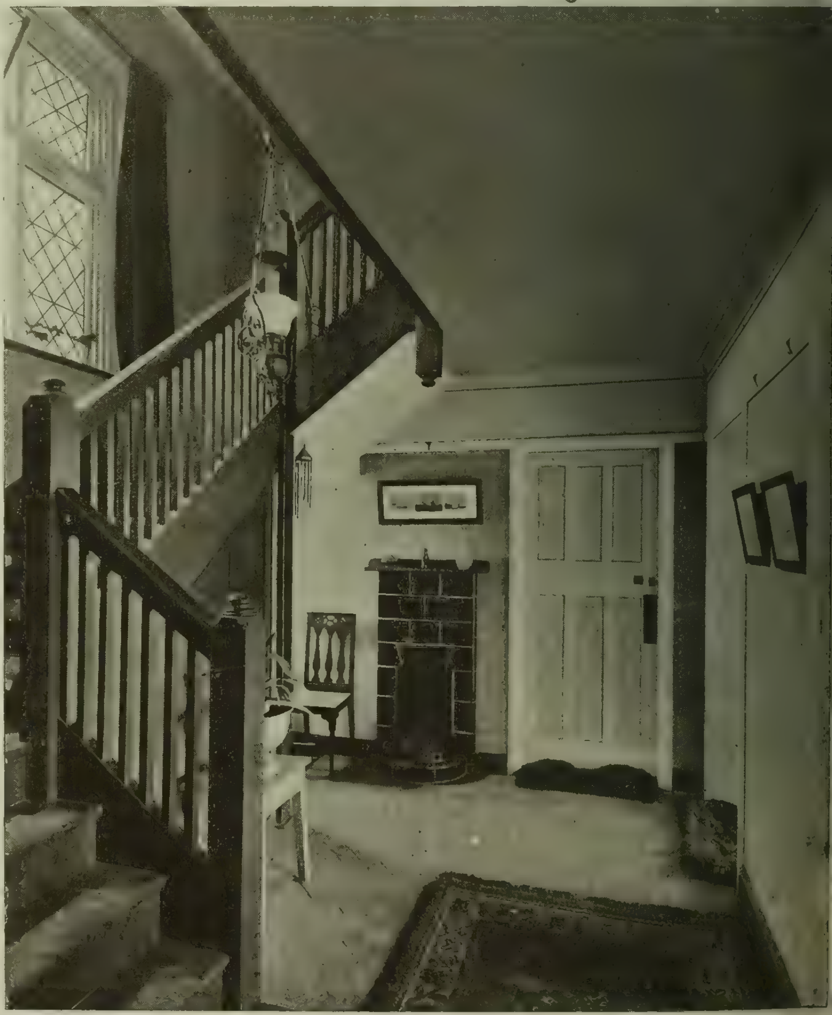
Mr. C. E. Bateman, F.R.I.B.A., Architect.

FIFTY YEARS AGO.

Competition.

The Doncaster Markets.—The Town Council in Committee have inspected the plans sent in by various architects for the rearrangement and extension of the markets of this borough. The drawings were numerous, and in order to facilitate inspection hung in the saloon, under the supervisio Mr. Anelay, the Borough Surveyor. premium for the best design is £100 for the second £50.

[*** From the *Builder* of May 26, 186 Ed.]



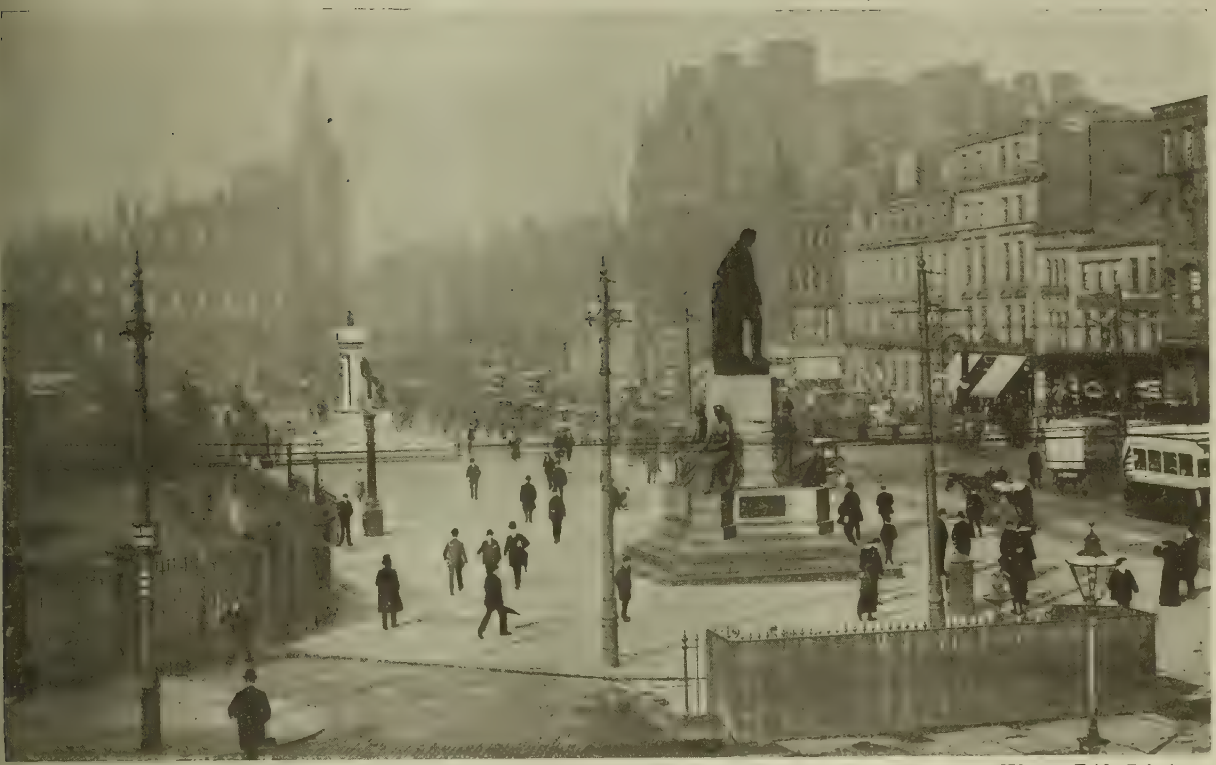
[Photo: Thos. Lewis.

"Darian," Stocksfield, Northumberland: Entrance Hall.

Mr. Edward Cratney, Architect.

HE MONUMENTS OF OUR PROVINCIAL TOWNS.

II.—MANCHESTER.



[*Photo.: Frith, Reigate.*

Fig. 1. Piccadilly.

HE most striking feature connected
with the monuments of Manchester is
the way in which they are collected
er and used principally to adorn two
ree squares and thoroughfares. The
ity are, in fact, to be found in Albert-
, Piccadilly, and St. Ann's-square.

principle of such an arrangement is
ent, tending as it does to the creation of
rtistic centres in a city.

se centres are often, moreover, of great
ercial or municipal importance, and both
culpture and architecture are brought
close association with the large number
ople who pass daily to and fro about
work. This constant association must
upon many minds something of the
g and elevating influence of artistic
ht.

numents should not, however, be used to
ent a square indiscriminately. They
form an integral part of the scheme and
nected to their surroundings, recognising
the thoroughfares and secondly the
ngs.

ert-square, Manchester, is found to suffer
seriously from the arrangement of the
aches. Its shape is that of an oblong rect-
one side being occupied by the municipal
ngs, and the three others by various office
and by shops. Five statues are arranged
ne upon an island pavement in the centre,
tram-routes pass through the square
either side of this island. The main
aches, unfortunately, are not axial,
ter at the angles of the square, thereby
g any vista more or less impossible.
best view obtainable from the main
ach is at a very acute angle, and it is
when the visitor actually emerges into
uare itself that sculpture and buildings
e seen in reasonable relation. There
o roads which enter opposite the block
nicipal offices, but they are so unimportant
hey cannot receive serious consideration
proaches. In these circumstances, the
s are rightly made to face the municipal
buildings; but by so doing they have a very broken and uninteresting background. The long straight row of five statues is not the most desirable arrangement, but was perhaps unavoidable.

Passing from this site to Piccadilly (Fig. 1), there is a great difference in the surroundings and circumstances. Naturally, as it at present stands, the vacant land once occupied by the infirmary gives the whole place a most desolate air. But this must eventually be built upon, and it is at once obvious that, if these statues are to be successful, whatever building is erected will have to be connected to them by its scheme of lay-out or recognise them in its massing.

Piccadilly is a street and not a square; and in spite of its width and the ample space available the monuments could not be justified except by their connection to a building. They will undoubtedly be difficult to incorporate successfully in this way, and this difficulty will be increased by the base of the principal group (that to Queen Victoria) (Fig. 2), which consists of a large flight of steps, square on plan—quite in keeping with an open park site, but here out of place.

It would seem a suggestion worthy of consideration that Watt and Dalton should be entirely removed. They are very poor in design, without life or expression, and have no sentimental or other value which would make their loss very seriously felt. Three statues in the length of this space instead of the present five would be amply sufficient.

Besides these two sites there is a small square in front of St. Ann's Church, the situation and lay-out of which make it an ideal position for monumental work. Located quite close to several of the main arteries through the city, it is yet not itself crowded by electric trams, flying taxi-cabs, and all the bustle and hurry of modern life. Its principal group can readily be seen from the chief of the main roads, passing a short distance from the entrance to the square, and when the pedestrian turns aside to examine and enjoy the work he is not in danger of life and limb or of being a block to the progress of those of his fellow-creatures who, at the moment, have no leisure to examine sculpture or read inscriptions.

St. Ann's-square is entered at one end by Exchange-street, a short connecting-link from the main road; the vista at the back of the square is closed by the façade of St. Ann's Church. The principal group within its precincts is the South African War Memorial, by Hamo Thornycroft (Fig. 3), which is placed on the axial line of Exchange-street and just within the boundaries of the square. The Cobden Statue—a much older monument—is on the same axis, but further back. The position of both is very satisfactory.

The grouping of statues in well-defined areas in the manner now under discussion has a further point in its favour in that anyone interested in the sculpture of the city can see the principal groups with much more ease and certainty than is the case when they are scattered at street junctions in all parts of the town.

Having thus glanced at the general placing, it will be well to turn to the consideration of the separate groups in detail.

Commencing with Albert-square, by far the most important monument, by virtue of its size, is that to Prince Consort (Fig. 4). This is on similar lines to the Albert Memorial in London—a type of monument which seems to have delighted the architects of the Gothic Revival. The architecture of this group was designed by Messrs. T. Worthington & Sons, and the figure of Prince Consort modelled by M. Noble. The base of the design is a square flight of steps, and upon this is placed a high base, in the upper part of which are modelled panels, the whole being guarded by an elaborately-designed iron railing.

Protecting railings, such as these, placed at the base of a monumental structure, while they may sometimes have an element of richness, are, nevertheless, purposeless features. With adequate police supervision there is little risk of serious damage from the action of the general public, and the amount of traffic up and down the steps for the purpose of a closer inspection of the work is not likely to cause any considerable amount of wear and tear. Their presence seriously detracts from the freedom and atmosphere of the monument, and gives a feeling of closeness and a suggestion of repulsion which is very detrimental to the effect of the complete group.

To return, however, to the design itself. Upon the base before mentioned is a canopy modelled obviously upon the design of the Albert Memorial in London, and inside this a standing figure of the Prince. The monument is a fair average specimen of the work of the time. No one would now think of designing a Gothic structure of this kind, but architectural monuments in themselves undoubtedly have a great force and an effect which the simple sculptured figure, combined even with an elaborate pedestal, can never possess. They convey a suggestion, moreover, of an appreciation of architecture by the lay public which is most beneficial to any art. When the public of the present day appreciate the value of architecture as the perfect expression of contemporary civilisation, the architectural monument will return to favour, not, of course, devoid of sculpture, but forming a field in which the sister art can be displayed to its own greater advantage. This has been, in fact, the case in the last few years in Germany and also in the United States.

Upon either side of the monument to the Prince are placed respectively statues to the memory of Oliver Heywood and John Bright (Fig. 5). Each is of marble upon a white granite base, the figures being modelled by Bruce Joy, one in 1894 and the other in 1891. The design of the bases is simple and direct, containing few mouldings and no enrichment, yet not being devoid of interest, which makes them very suitable for their position. Anything small in scale or of weak outline would be quite out of place in so large a square. The figure of Bright is well in harmony with the base, and the small projection of the moulding, crowned by a high weathering in addition to the blocking, is a point worthy of notice. If this capping be compared with that upon the War Memorial in St. Ann's-square, although the latter is quite different in design, it will be seen how much is gained by the small projection given to the older example. In this instance, as in most of the Victorian work, the detail of the sculptured figure is very tame. Modern work is usually better in this respect, but it should be quite possible to impart life and vivacity to the monument without the introduction of Rococo forms in the architecture or an excessively literal rendering of natural features in the sculpture, both of which are foreign to true art.

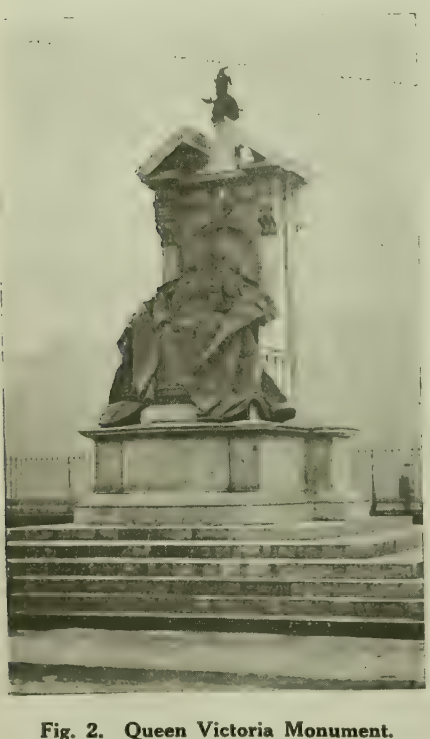


Fig. 2. Queen Victoria Monument.

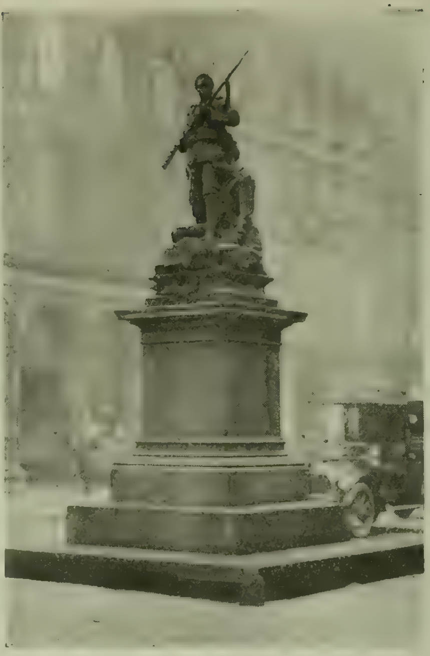


Fig. 3. South African War Memorial.

In addition to these groups, Albert-square contains a monument in bronze by M. Raggi to Mr. Gladstone, upon a red granite pedestal. The attitude is cramped and awkward in the extreme. The great statesman is portrayed stepping partly forward and holding a roll in one hand, as if in the heat of debate he strove to reach his audience by sheer physical force. The conception was good, the idea praiseworthy, but the sculptor has failed to impart the necessary feeling to his work. So far is it removed from the sublime that it almost suggests the ridiculous. The lay public, with its usual intuitive realisation of indifferent work, has created a catch-phrase in reference to the attitude of the statue, and it is said that the roll indicates "the way to Mount-street."

At the opposite end of the paving to the Gladstone Memorial is a bronze figure of James Fraser, late Bishop of Manchester. The modelling of the figure itself is much above that of Gladstone, and is quite a good piece of work. It is from the hand of Thomas Woolner, R.A. The pedestal is of dark grey granite, a material much more in harmony with bronze than the red Peterhead common a few years before. This base has rather too many mouldings to be completely successful. The shaft is ornamented by three bas-relief panels and an inscription. The placing of the inscription upon the base at the back of the figure is a curious feature; after examining the modelling of the bronze it is necessary to walk to the far side to discover the name and title of the man whom it represents.

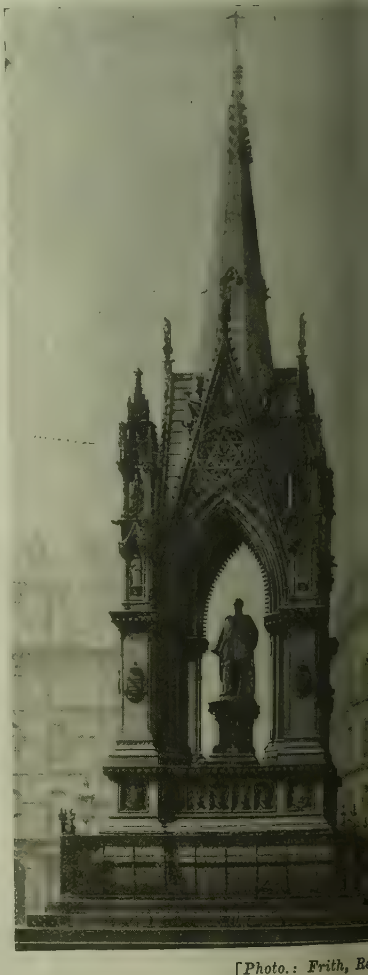
In the entrance hall of the municipal buildings, which, as previously mentioned, are in Albert-square, are two seated figures—one of John Dalton by Sir Francis Chantrey, and the other of Dr. James Prescott Joule by Gilbert. The latter is by far the more interesting. It represents Joule, who has a fine bearded head, looking at a small scientific instrument. The figure is in white marble, and the instrument in bronze. The introduction of a second material, giving a brilliant dark spot in a field of white, adds a masterly touch to a really good figure. The modelling of the head and beard are well carried out, and must be rather in the nature of an idealisation of Joule's own head, although probably he had well-defined features. The whole bearing of the group suggests not only the features of the particular man represented, but is an excellent portrayal of "a great scientist."

In the inner hall are several full-length figures and a collection of busts of various mayors and benefactors, dating from
to 1907. Few of these are of any great
and the majority are very plain and com
place representations of apparently not
interesting personalities. The early on
particular are quite devoid of interest.

The group of statues in Piccadilly
claims attention, and the two figures of D
and Watt, by W. Theed, may first be menti
These are both seated figures, executed i
red sandstone common to the district. N
possesses any interest, and, as was sugg
above, could very well be dispensed
entirely, unless there is any local senti
attached to their preservation.

Of the other three groups two are
One, erected in 1853, is by W. Calder Ma
to the memory of Peel. For its period i
really good piece of work. The base, com
of three high granite steps without moul
forms the seating for a simple pedestal
which stands a figure of Peel, in bronze.
figure has some good modelling, and an
of attitude seldom found in work as ea
1853. Below Peel, and seated upon th
step of the base, are placed two figures
on either side—so that the three to
suggest the angles of a triangle. These f
represent respectively "Art and Sci
and "Commerce." That of Commer
particularly good. The inscription on the
consists of the simple name, "Peel," a
amply sufficient. The plain block lett
which it is composed seem to sympathis
with the general feeling of the work.

At the opposite end of the paving is a
ment erected to the memory of the Du
Wellington in 1856. The sculptor is Ma
Noble, but the level attained by this monu
is not nearly so high as that of the Peel
The figures are more stiff and hard i
modelling, and the attitudes adopted
cramped and uncomfortable. Althoug
general composition has not attained m



[Photo.: Frith, R

Fig. 4. Albert Memorial.

it contains the elements of a good
The growth from the base to the
ures, surrounding the central pedestal
mplished with apparent ease and
ty; but the figures seem to have
ent room, and the general direction
the main lines of their design, instead
g up to the crowning statue of Welling-
ves the impression that they are four
ds and are not intimately related to
le group. The introduction of bronze
f panels low down is a feature which,
situations, would be most effective.

entral, and most important, situation
stretch of Piccadilly is given to the
Victoria Memorial, a group designed
slow Ford. The sculptor has here
edly felt the limitations of monumental
very seriously, and the group cannot
idered a success. Its failure is diffi-
account for, because its chief fault
that is quite foreign to the majority
sculptor's work. The figure of the
far from appearing too light, which
almost have been expected, looks
ely heavy, totally lacking in life and
—just a representation of a stout lady
d in voluminous drapery. The fault
erated by the smallness of conception
d in the architecture, and by the
poverty-stricken appearance of the
gs. The "architectural throne" is
a high flight of steps which seem to
of the heavy nature of the central
o that all the elements of the monument
war with each other, with disastrous
The only possible way to avoid bad
tural detail in monumental pedestals
ploy an architect; an architect, more-
ho knows something of the class of
ith which he has to deal, and also a
o is in sympathy with the aims, ideals,
uirements of the sculptor.

ack of this monument contains the figure
man with a child in her arms, under
e the words, "Let me but bear your love,
your care." The figure is fairly good,
ns rather foreign to its surroundings.
ase beneath may or may not have been
al expression of the great Queen, but
petual record upon a public monument
ng it conveys is too sentimental.

ttempt is made in various places to
e blue and other colours by means of
with only partial success.

g notice may be given to the Gothic
ected in St. Peter's-square to com-
te the church which, until 1907, stood
ntre. The situation of this monument
llent, its design, unfortunately, very
e. In the first place, the lay-out—
grass plot surrounded by an exception-
r type of cast-iron railing—is meagre
xtreme. In the second place, the shape
awn bears no relation to the shape of the
The design of the cross itself is very
place; the most noticeable feature is the
in which the inscription is applied. This
around the top of the shaft that it requires
two circuits of the square to discover
begins and one or two more to decipher
ents. By this time, in all probability,
crowd will have collected to witness the
linary behaviour of a person making
l circuits of the monument with head
d a strained expression of countenance.
statue of Cobden, in St. Ann's-square,
no comment.

Var Memorial (Fig. 3) shows a group of
n in khaki. One, seriously wounded, is
d by a second, who has himself every
nce of a man in desperate plight.

ugh a figure in collapse cannot be
d as an ideal *motif* for a monument,
up has achieved greater success than
aving finer themes. Its cohesion is its
quality, and for this reason alone it
be accorded far more attention than
devoted to the majority of modern
ents.

pedestal is a study in contrasts. Its
portion presents broad flat surfaces,
scale, imparting breadth to the design.
this the large bronze panels are made
ing by a kind of surface enrichment,
ed of the names of those who died or
illed. The base and capping moulds, however, do not in any way echo these broad surfaces; they are thin, stingy mouldings, markedly lacking in precision and outline. In spite of these weak points the group displays a directness of handling and spontaneous effect which indicate an experienced hand and practised eye.

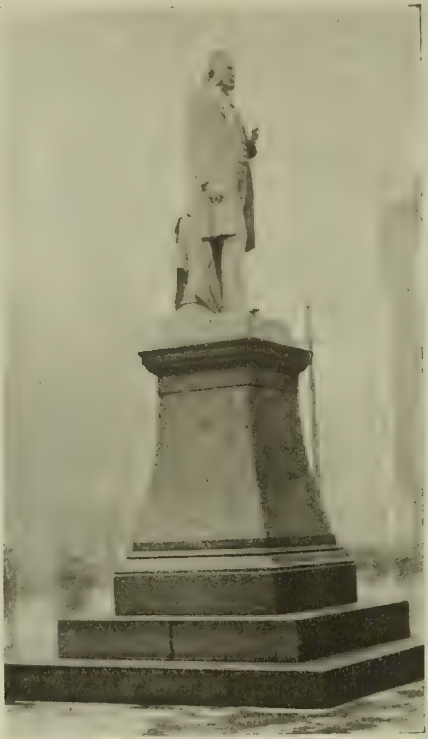
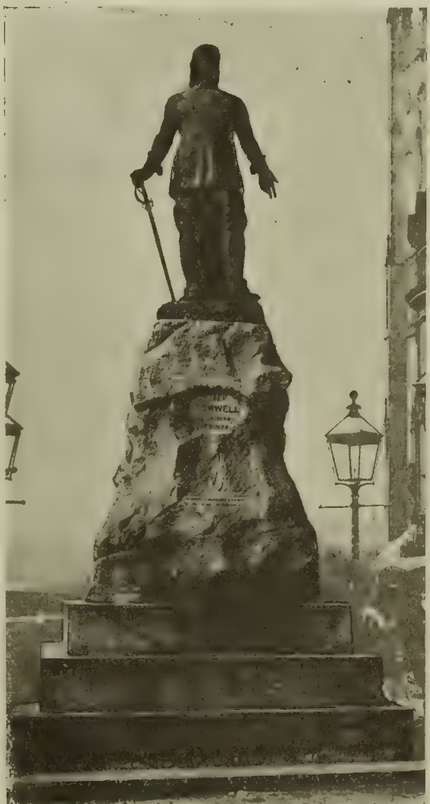


Fig. 5. John Bright Monument.

Opposite the cathedral and close to Exchange Station is a monument to Oliver Cromwell (Fig. 6), erected in 1875, and modelled by Matthew Noble, the sculptor of the Wellington group. The direction in which the statue faces is somewhat strange, the figure being made to look directly towards the façade of an hotel upon the angle of Victoria-street and Deansgate, and with its back to the main approach. The strength and appropriateness of the rough-hewn granite base is one of its best features.



[Photo.: Frith, Reigate.

Fig. 6. Oliver Cromwell Monument.

The most recent addition to Manchester sculpture is the Edward VII. Monument in Whitworth Park, by John Cassidy. For a park site the lay-out is remarkably uninteresting, and such an ordinary scheme of plain grass-plots, arranged entirely to suit the convenience of two or three insignificant paths, is in marked contrast to the beautiful carpet borders and floral designs almost invariably found in similar situations in France and Belgium. The architecture of this group is by far its best feature. The mouldings show a refinement and individuality which are most interesting; and, in fact, the whole pedestal is an excellent piece of work. The figure, unfortunately, is far short of this, and altogether fails to complete a group admirably begun by the architecture. The folds of the Garter robes, instead of imparting richness to the figure and acting as a connecting-link between sculpture and architecture, seem to drag down in shapeless lines from shoulder to heel.

The statues of Manchester, as a whole, are not upon a high level. For the richness, size, and importance of the city they are remarkably few in number and small in conception and scale, and are not to be compared to the large number of good groups possessed by the sister city of Liverpool. The Edward VII. Memorial is upon a larger scale than that of any previous monument, and, although in this case it has not met with complete success, the selection of a comparatively unknown man to execute the design is a praiseworthy action upon the part of the responsible committee.

It is to be hoped that future development and the growing appreciation of the plastic arts will lead to the erection of many fine groups, so that Manchester will become a great artistic centre as well as a great centre of commerce.

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WAGES IN THE BUILDING TRADE.

Kidderminster.—At the quarterly meeting of the Midland Centre Board of Conciliation for the Building Trades held at Walsall on May 11 an appeal was heard from the carpenters and joiners, bricklayers and labourers of this district, who had given notice for an advance of 2d. per hour in the rates of wages, viz., 8½d. to 10½d., 8½d. to 10½d., and 5½d. to 7½d. respectively. After hearing witnesses representing the employers and operatives of Kidderminster the Board decided as follows:—"That the wages of the carpenters and joiners and bricklayers of the Kidderminster district be advanced to 9d. per hour, and the labourers to 6½d. per hour, as from June 1 next, with a further advance to each of these trades of ½d. per hour at August 1 next, the rates then in force to remain unaltered until March 31, 1918."

London.—The question as to the rightful trade to fix and stop Uralite and other similar slabs, raised by the Operative Plasterers' Association, was considered by a Local Joint Trade Committee recently, and after full discussion the following resolution was carried unanimously:—"That where Uralite or slabs of similar make are used they shall be fixed by whichever trade shall finish the slabwork, *i.e.*, where stopped with plastic material by plasterers, and where fixed or finished by any other process than by plastic materials, then by carpenters." The question of whether stonemasons or bricklayers shall have the right to fix artificial stone was considered by a Local Demarcation Committee (National Scheme) on the 17th inst., and after full discussion the following resolution was carried:—"That inasmuch as artificial stone is used in so many different parts of a building it is impossible to lay down any hard-and-fast rule, this board is of opinion that the trade employed for fixing should be left to the discretion of the employer."

THE BUILDING TRADE.

BUILDERS' CLERKS' BENEVOLENT INSTITUTION.

FOUNDED in 1866, this Institution this year attains its jubilee. Its object is to grant pensions of £30 per annum to necessitous clerks, or £24 per annum to their widows, for the maintenance and education of their orphan children, and for making grants of temporary relief. The thirty-ninth annual dinner, held on May 16 at the Holborn Restaurant, was a most successful function and was attended by close on 250 persons. Mr. F. Shingleton (Messrs. Leslie & Co., Ltd.) presided, and was supported by Sir H. H. Bartlett, Bart., Messrs. F. Higgs, F. G. Minter, W. Downs, G. H. Parker, R. C. Foster, H. T. Holloway, A. Ritchie, W. J. Renshaw, E. J. Strange, A. Strachen Bennison, C. W. Dunford, S. B. Depree, H. Northcroft, B. Carter, R. B. Chessum, G. H. Hadland, etc.

The usual loyal toasts, proposed by the Chairman, were enthusiastically received, as was that of "His Majesty's Forces and Allies," proposed by Sir H. Bartlett.

The Chairman, in submitting the toast of the "Builders' Clerks' Benevolent Institution," made a strong appeal for further funds. They were aware, of course, that many charitable societies during the present crisis were not holding festival dinners, but he acquiesced in the decision of their Committee to have the meeting, and was there to plead the cause of the Institution. They were all familiar with the history of the Institution, which that year attained its jubilee, and there was no need for him to describe the vast amount of useful work it had done. At the present time there was a very great need for further assistance, for owing to the lack of funds they had had to reduce the number of pensions from thirty-three to twenty-three. There was now a long list of persons awaiting election, and it was his hope that as the result of their generosity some of them might receive the benefits they so urgently needed. Some of his friends had been most kind in responding to his appeal, and he trusted that many connected with the building trade who were not present would also come to their aid.

Mr. John Austin (Secretary) announced that the sum of £534 11s. 6d. had been subscribed, and he hoped at least £550 would finally be forthcoming.

Mr. W. J. Renshaw, in proposing the "Architects and Surveyors," also referred to the fact that the Society had attained its jubilee and to the need for increased subscriptions if the good work was to be maintained. In the past architects and surveyors had shown their practical sympathy with the Institution, and they hoped it would continue. They had also to thank architects and surveyors for their courteous treatment of the representatives of builders. They knew that architects and surveyors had been very hardly hit in these strenuous times, although perhaps the architects had been mostly affected, because surveyors had been able to keep going by the adjustment of variations. Builders also had been badly hit, except a favoured few who were having the time of their lives. He trusted that after the war the Royal Institute of British Architects and all architects and surveyors would remember that conditions had been very adverse for builders, and would treat them sympathetically, so that the trade might benefit in what they hoped would be the splendid wave of prosperity in front of them in the future.

Mr. H. Northcroft, in reply, said that whatever architects were suffering applied also to surveyors. It was a matter for regret that Mr. W. Willett was no longer with them to see the successful result of his fight for the Daylight Saving Bill. He (the speaker) would like to see another great reform, which was the adoption of the metric system of weights and measures. This seemed to him the right time for pressing such a reform on the attention of the Government.

Mr. Godfrey Sykes proposed the toast of the "Builders and Builders' Merchants."

Mr. E. L. Strange, responding for the builders, expressed approval of the way the Government were taking up the interests of industry. As builders they appreciated the sterling services of their clerks, and in these strenuous times he hardly knew what they would have done without their whole-hearted assistance.

Mr. Alex Ritchie also responded, and suggested that the Institution should give first consideration to the claims of those who subscribed to the funds.

Mr. F. Higgs proposed the health of the Chairman, and warmly congratulated Mr. Shingleton on such an admirable result in abnormal times.

The toast was enthusiastically honoured.

[A war-badge was lost at this dinner. We shall be pleased to return it to the owner if it is sent to us.—ED.]

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The Electricity Committee of the Aberdeen T.C. has agreed to feu 11,887 sq. yds. of ground at Clayhills from the North of Scotland and Town and County Bank for the purpose of an extension to the electricity works.

Annan.—At a recent meeting of Annan Dean of Guild Court plans were passed for the erection of a glove factory at Mafeking-place, Annan, for Messrs. W. Tyrer, Sons, & Co.

Argentina.—The *Boletin Oficial* (Buenos Aires) of April 3 publishes a Decree approving the project for extension works at the hospital at Rio Cuarto, Province of Córdoba. A public call for tenders for the execution of the works will be made by the "Comisión Asesora de Asilos y Hospitales Regionales," Belgrano 909, Buenos Aires.

Bedford.—Plans approved by the T.C.:—Mess-room and lavatories, Messrs. W. H. A. Robertson & Co., Ltd.; extensions to lavatories, Messrs. W. H. Allen, Son, & Co., Ltd., Queen's Engineering Works; bathroom and water-closet, etc., Mrs. M. T. Hurst Hodgson, Abbey Cottage, Cardington-road; temporary coach-house, stable, and harness-room, Miss Penfold, 23, Lansdowne-road; store and motor shed, Mr. F. Ray, Cauldwell-street; new lavatories, Igranic Electric Company, Ltd., Elstow-road; new house, Mr. J. J. Stanton, Goldington-road; brass foundry, extensions to steel test house, etc., Messrs. W. H. Allen.

Bedminster.—The Bristol Docks Committee has approved of an application made on behalf of the Imperial Tobacco Company, Ltd., to extend their premises and buildings over a portion of the old Malago stream at Bedminster.

Bromley.—The Highways and Buildings Committee has recommended the following plans for approval:—Mr. G. A. Parsons' plan of motor shed, Somerford, Park-avenue; Mr. J. L. Woodhams' plan of covered way and timber store, Prospect-place; Messrs. T. Crossley & Son's plan of addition to garage, 122, College-road.

Buckie.—The T.C. has passed plans for smithy at Baron-street, for Mr. George Smith, jun.; new shop front at 9, East Church-street, for Mr. R. Gillan; and motor garage at Cross-lane, for Mr. George M'Kenzie, flesher.

Chatham.—The T.C. has passed the following plans:—House, Wyles-street, for Mr. J. Hawes; and exit subway at New Cinema at rear of the Empire Theatre of Varieties, High-street.

Clayton.—Plans for the following new buildings in Clayton have been sanctioned by the City Council:—Salt Cake Store to works, Ashton New-road; conveniences to works, Clayton-lane and Cycle-street; Sulphuric Acid Conce tion House to works, Chatham-street; re block plan of chemical works, Bank-st revised plans and section to Aniline Dye H to works; stables and garage to works, (street; garage and office, Clayton-lane; st off Howgill-street; shed to works, Crabtree- workshop to works, Crabtree-lane; loading to works, Turner-street; addition to cart she West-street; conveniences to works, Cycle-s

Crompton.—The D.C. has approved plan a temporary shed at Diamond Rope W coal, paraffin, and petrol store at Rutland and hot water shed for the Ash Spinning pany, Ltd.

Dundee.—The Works Committee of the has approved plans of new warehouses in town, for Messrs. A. & S. Henry & Co., Ltd

Epsom.—The U.D.C. has approved plan one pair of cottages in Upper Court-road Mr. E. Stredwick, and addition to garde cottage, West Hill House, Mr. Hayworth Mr. Mountain.

Foleshill.—The Guardians and Councils approved plans for mission hall, for the ch trustees at Holbrooks-lane; two houses for F. Smith, at Crescent-avenue, Stoke; amended section of the outfall sewer for Coventry Corporation at Stoke Heath.

Fraserburgh.—The T.C. has agreed to pu a wooden erection next the herring mart, a estimated cost of £29 10s.

Fulham.—The Ministry of Munitions granted permission to the War Seal Found to commence building operations upon the of the first block of War Seal Mansions t erected in Fulham. The work upon the fou tions will be started immediately.

Gillingham.—The Council has approved of a bungalow at Hempstead-road, Wigmore Mr. Filmer, submitted by Mr. Mattocks, a bungalow at Orchard-road, Wigmore, for M Masters, submitted by Mr. Mattocks.

Glasgow.—Glasgow Dean of Guild Court granted linings to the Scottish Co-oper Wholesale Society, Ltd., 95, Morrison-stree erect an extension to the tinware factor Shieldhall Works, Govan; Messrs. W. B. & Co., Ltd., oil merchants, 24, Queen-stre erect a still house in Crownpoint-road; the (Company, Ltd., mineral water manufactu 200, Commercial-road, to re-erect bu destroyed by fire in Commercial-road; an North British Electric Welding Company, 45, Hope-street, to erect a brick building Finnieston-quay.

Goole.—The T.C. has approved the follo plans:—Alterations to boiler shed, Bridge-s for Messrs. Webster & Bickerton, and addi to 110, Boothferry-road, for Mr. T. Newton

Grimsby.—The Grimsby Fire Brigade mittee adopted a new fire station exte scheme, which is estimated to cost £463 1

Hitchin.—The R.D.C. has approved the fo ing plans:—Extensions to Messrs. Kry Lahy's factory, Work's-road, Letchworth; e sion to power station, Works-road, Letchw for First Garden City, Ltd.

Huddersfield.—The T.C. has decided to to the L.G.B. for financial assistance to 300 houses for the working classes. It is posed to build twenty-five houses at Br eighty at Long-lane, Dalton, and 19 Waterloo.

Hythe.—At a recent meeting of the T.C. i agreed that the Surveyor should prepare fications for a brick building for housin steam-roller, and that tenders be invited fo building.

Leyland.—A plan of a proposed dining h Thurston-road, for the Leyland Motors, Ltd been approved by the U.D.C.

Linthwaite.—Plan of a garage at Ban road, for Messrs. John Crowther & Sons, has been approved by the U.D.C.

London.—The justices have sanctioned for alterations and additions to the Red Rosoman-street, Finsbury. The Licensing tices have sanctioned plans for alterations Palladium, Argyll-street; Jermyn Court Piccadilly-circus; and Regent Restaura Air-street. The L.C.C. has sanctioned ex ture for the execution of improvements, at the following schools:—Bermondsey, Chaucer, providing cleansing station; Bo Bromley, High-street, additional exit; Por Industrial, escape ladders; St. Pancras, S., chester-street, drinking fountains; Whitec Buxton-street, adaptation; Woolwich, Plum work to schoolkeeper's house. The Counc also made arrangements for the repair of p of Putney Bridge, Wandsworth Bridge, Westminster Bridge (eastern approach). have been approved by the L.C.C. for wid of the L.B. and S.C. railway bridges over (dish-road and Bleak-lane, Tooting Bec Cor and modification in the structure of entrances to the Warwick-avenue station London Electric Railway.

Merfield.—Plan for the erection of a garage in Doctor-lane has been approved b D.C.

Milmrow.—The Council has approved p the proposed addition to the dyeing sh Birch Mills.

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* See also our list of Competitions, Contracts, etc., on page 392.

Kilpatrick.—At a recent meeting of Old
ick School Board intimation was made
e Department had approved of plans for
oposed new schools at Whitecrook and
ir.

.—A plan for a motor house to be erected
Sandbanks, on behalf of Mr. J. S. Hodges,
en referred to the Chairman of the
r Board.

ıgal.—The *Diario do Governo* (Lisbon) of
publishes the text of a Bill to authorise
nicipal authorities of Guimaraes to con-
loan, up to 490,000 escudos (about £70,000
rent rate of exchange) to be devoted to
public works, including the following:—
stallation of an electric tramway system
n Braga and Guimaraes, the construction
men's quarters, the laying out of a park,
ction of a new municipal building, the
of water to Guimaraes and Vizela. A
Bill, published in the same issue of the
proposes to authorise the Alenquer
pality to sell certain property with a view
oting the proceeds obtained therefrom to
nstruction of a slaughterhouse, the supply
er to the town, and the opening of a new

sgate.—The T.C. has approved plans for
n of sterilising-room at Ramsgate General
al, and for alterations to position of
on at 37, High-street; owner, Mr. J.
s.

mond.—The Corporation has approved the
ng plans:—Messrs. G. E. Sturgis & Son,
n to "Ferndale," Kew-road; Mr. K. D.
, on behalf of Young & Co.'s Brewery,
additions to the Old Ship public-house,
treet; Messrs. J. Lyons & Co., Ltd., addi-
Nos. 46-47, George-street.

Helens.—Plans approved by the Health
ttee:—Verdun-street and passages,
n Parr-street and Crossfield, for Messrs.
aw & Son; sanitary improvements and
ottages, Parr-street, for Mr. John Scrym-
extension of motor garage, Boundary-
for County Carriers, Ltd.; washhouse,
nt-lane, for Sutton Heath and Lea Green
ies

en.—The U.D.C. has approved plans sub-
by the Silsden Dyeing Company, Ltd.,
purpose of erecting extensions to their
g works situated in Keighley-road.

hwaite.—Plans passed by the U.D.C.:—
ion to motor garage, for Messrs. Bamforth
Howgate-road, and the alteration of one
into two dwellings at Market-place, for
. W. Walker.

hend.—The T.C. has approved of the fol-
plans:—Three bungalows, Electric-
. Mr. T. J. Dennis; proposed alterations
dditions, 15, Burdett-avenue, Mr. W. T.
alterations and additions, 93, Queen's-
Mr. R. Thornton; alterations to drains,
ick-road, the Vicar and Churchwardens of
viour's; new drainage, Woodfield Cottage,
e-crescent, Mrs. W. Winn; conversion of
into surgery, 2, Lovelace-gardens, Mr.
Kerridge; alterations and additions, 773,
n-road, Mrs. A. Kerby; conversion of two
into shops and new additions, 369 and
ondon-road, Miss L. M. Keating; conver-
house into shop, 401, London-road, Miss
Keating.

h Shields.—Plans have been completed for
hospital for infectious diseases and cases
erculosis, which the Corporation has had
templation for some time.

ord.—The T.C. has approved the follow-
ans:—Mrs. C. A. Finlay, dwelling-house,
te-street; Gaol-square Motor Garage Com-
Ltd., extensions to motor garage, Gaol-

ies.—The R.D.C. has approved plans for
ited Glass Company's factory at Dawley.

ing.—The T.C. has approved of a scheme
erection of miners' cottages at Cambus-
h.

od.—The R.D.C. has decided to spend
15,000 in building fifty dwellings for
alty workmen.

ıry.—Messrs. Allen & Thompson have been
ted advisory architects in connection with
uncil's suggested town-planning scheme.

thoughton.—The Council has approved
and specifications for the erection of forty-
ouses, and certain tenders have been
ed provisionally. The plans and specifica-
have been forwarded to the L.G.B. and
alty for approval.

mouth.—The T.C. intends to build a new
at the Isolation Hospital, and to adapt
esent kitchen as a sitting-room for the
The cost of the scheme is estimated at
Plans passed by the T.C.:—Plan sub-
by Mr. S. Jackson, for extension of work-
for Mr. C. Furby, 116, Newstead-road;
submitted by Mr. S. Jackson, for new
om, water-closet, and new drainage at
York-buildings; plan submitted by the
ational Stores, Ltd., Mitre-square, London,
ulling down and rebuilding No. 104,
ary-street; and plan submitted by Mr. W.
ard for new cart shed at rear of No. 22,
iew-road. The T.C. has resolved to make
ation to the L.G.B. for a loan to carry
works suggested by the military authori-
nvolving the erection of a shaft on the
parade to carry away sewer gas from the
outfall sewer, and the erection of a shaft
wall of the Red Bararcks to improve the
tion of the Hope-square sewerage district.
ost of such works the Borough Surveyor
ted at £300.

lwich.—A fund has been inaugurated for
teration, repair, and restoration of Enon
, in High-street, Woolwich.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible or errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	10	9½	9	9	9½	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	10	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¾	10½	8½	8½	8½
Bishop Auckland	9	9	9	9½	10‡	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	9½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6½	6½	6½
Bradford	10	10	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	11	11	10½	9	9½	10	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8½	6	6	6
Chester	9½	10	10	9½	9½	9¾	8½	6½	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	11	11	10½	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	10	10	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9½	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8½	7	7	7
Harrogate	9½	9½	9½	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10½	10½	10‡	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7½	8½	8	7	7	5½	5½	5½
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10½	10½	10½	10½	10	10	9	8½	8½	8½
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10½	10½	10	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	9	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	10	10½	10½	10½	10‡	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7½
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	11	10	8½	8½	9
Oldham	10½	11	10½	10	9	10	9½	7	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8½	6½*	6½*	6½*
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½‡	9½‡	9½‡	9½‡	9½	8½‡	7½	7‡	7‡	7‡
Preston	10½	10½	10	9¾	9½	10	9½	6	7	7½
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10½	10	9½	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9¼	9¼	9¼	9½	8	9¼	8¼	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10	9¾	9¾	9½	9½	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10½	9½	10	10	9	7½	7½	7½
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10½	10½	10‡	10½	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	11	10‡	9½	9½	7½	7½	7½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	10	9½	9½	9½	8½	10	8½	7½	7½	7½
Warrington	8¾	10½	10½	10½	8½	10½	9½	6¾	6¾	6¾
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10½	11	10	10	9½	10½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	10½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	8	6½	6½	6½
York	9¾	9¾	9½	9½	9½	9½	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 2s. 6d. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv.; Public Appointments, —; Auction Sales, xviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements, and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

May 31. — **Glyncorrwg.** — Hotel. — For the erection of a new hotel at Cefn-y-van, Cymmer, Glyncorrwg. Quantities may be obtained and plans inspected at the Brewery, Pontypridd.

May 31. — **Easingwold.** — Dwelling-house.—For the following work required in the erection of new dwelling-house, Uppleby, Easingwold:—Bricklayer, mason, etc., slater, carpenter and joiner, plumber and glazier, painter. Plans, etc., of Mr. J. Francis Todd, architect and surveyor, Easingwold.

May 31.—**Wigan.**—Extension.—The Electricity Committee of the Corporation invite tenders for the supply, delivery, and complete erection of extension to boiler-house, including steel construction work, concrete foundations, brickwork, joinery, plumbing, and slating. Specification, etc., at the Electrical Engineer's Office, Wigan.

June 3.—**Windsor.**—Alterations.—For carrying out proposed structural alterations to their cottage at Blacknest, Sunninghill, for the Windsor R.D.C. Specification may be seen at the cottage on application to the tenant, Mr. Kennard.

June 5. — **Milnsbridge.**— Adaptation.— The Commissioners of H.M. Works and Public Buildings invite tenders for the adaptation of the Liberal Club, Milnsbridge, for the purpose of a telephone exchange. Drawings, etc., may be seen on application to the Postmaster, Huddersfield. Bills of quantities, etc., of the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W. Deposit, £1 1s.

June 5. — **Penarth.** — Adaptation, etc. — For adaptation and repairs to farm buildings at Cogan Hall Farm, Penarth, for the Glamorgan C.C. Plans, etc., can be seen and form of tender obtained at Mr. Thurston's Cottage, Cogan Hall, and of Mr. W. E. R. Allen, Deputy Clerk of the County Council, Glamorgan County Hall, Cardiff.

June 5.—**Rotherham.**—Painting.—For the painting, whitewashing, etc., of certain elementary schools in the borough, for the E.C. Specifications, etc., of Mr. J. Platts, High-street, Rotherham.

* June 14.—**Dartford.**—External Painting.—The Metropolitan Asylums Board invite tenders for external painting.

No Date.—**Cliffe.**—Painting.—For painting the external wood and iron work of the Manor House, Pear Tree House, and three cottages at Cliffe. Mr. J. Burniston, solicitor.

No Date.—**Cloghroe (Co. Cork).**—Creamery.—For erection of a creamery at Cloghroe, Co. Cork, for the Newmarket Dairy Company, Ltd. Plans, etc., by Mr. William L. Kelleher, C.E., architect, 53, South Mall, Cork.

No Date.—**Weymouth.**—Renovation, etc.—For the renovation and painting of the bakery and branches of the Weymouth and District Co-operative Society, Ltd. Specification and particulars of the Managing Secretary, 26, Park-street, Weymouth.

No Date.—**Whalley (Lancs).**—Painting.—For painting part of the farm buildings at the Lancashire Inebriates Reformatory Farm. Specification from the Director, Lancashire Inebriates Reformatory, Whalley, Lancashire.

FURNITURE, MATERIALS, etc.

May 29.—**London.**—Stores.—The Directors of the Great Northern Railway Company invite tenders for the supply of certain new stores for six and twelve months from July 1 next. A list of the contracts and forms of tender may be obtained from Mr. Weeks, the stores superintendent, Doncaster.

May 30.—**London.**—Materials.—Supply to the Metropolitan Asylums Board of builders', engineers', plumbers', gasfitters', and electricians' materials. Forms of tender at the office of the Board, Embankment, London, E.C. Mr. Duncombe Mann, Clerk to the Board.

May 31.—**Liverpool.**—Materials.—Supply to the Directors of the Liverpool Overhead Railway of builders' materials during the twelve months ending June 30, 1917. Forms of tender on application to 31, James-street, Liverpool. Mr. E. J. Neachell, General Manager.

June 3.—**South Hetton.**—Timber, etc.—Supply to the South Hetton Coal Company, Ltd., for six months, of timber (English only), etc. Forms of tender from Mr. J. R. Lambert, South Hetton, near Sunderland.

June 7.—**London.**—Timber, etc.—Supply to the Guardians of the Poor of the Holborn Union during the three months from July 1 to September 30, 1916, of timber, etc. Forms of tender of Mr. H. Granger Holder, Clerk to the Guardians, 53, Clerkenwell-road, E.C.

June 13.—**Chichester.**—Oils and Colours.—Supply to the B.G. from July 1 to September 30, 1916, of oils and colours, etc. Forms of tender of Mr. F. Blagden Tompkins, Clerk to the Guardians, Chichester.

June 17.—**Maidstone.**—Cement.—Supply to the Asylums Committee of the County of Kent, for three months, of cement, etc. Mr. Francis R. Howlett, Clerk to the Committee, 9a, King-street, Maidstone.

ENGINEERING, IRON, AND STEEL.

May 26.—**Salisbury.**—Gas Engines, etc.—For the supply and erection of gas engines, with suction gas producers and a deep-well pump, with all necessary accessories, at their chief pumping station, Wyndham-road, Salisbury, for the T.C. Particulars from Mr. W. J. Goodwin, A.M.Inst.C.E., City Engineer and Surveyor, Municipal Offices, Salisbury. Deposit, £2 2s.

May 27.—**Exeter.**—Electric Light Installation.—For an electric light installation for the Guardians at the institution in Heavitree-road. Names to their Architect, Mr. R. M. Challice, 7, Bedford-circus, Exeter.

May 31.—**Hythe.**—Bastions to Sea Wall, etc.—For the construction of six bastions, one flight of steps, four additional timber groynes, and extension of one existing groyne to the foreshore at Hythe, Kent. Drawings, etc., may be inspected at the Town Clerk's Office, Hythe, or at the office of the Consulting Engineers, Messrs. Douglass, Lewis, & Douglass, 15, Victoria-street, Westminster, S.W.

June 2.—**Fernhill (Treherbert).**—Mechanical Filters.—For the supply, delivery, and erection of two mechanical filters at Fernhill, Treherbert, each capable of filtering 120,000 gallons of water per day, for the Rhondda U.D.C. Specification, etc., of Mr. J. B. Hughes, Waterworks Office, Treherbert, Rhondda. Deposit, £2 2s.

June 3.—**Riccall.**—Water Mains, etc.—Supply to the R.D.C. of cast-iron water mains, valves, and special castings. Forms of tender of Mr. J. Townend, Clerk to the Council, 1, Abbey-place, Selby.

June 21.—**Bristol.**—Foundations for T
Alternator.—For the construction of founda
for No. 11 turbo alternator at the Feeder
Generating Station, St. Philip's, Bristol
the Electrical Committee Specifications,
from Mr. H. Faraday Proctor, M.Inst.
M.I.E.E., Chief Engineer and General Man
The Exchange, Corn-street, Bristol.

ROAD, SANITARY, AND WATE WORKS.

May 26.—**Oxbridge.**—Drain.—The Stockto
Tees Corporation invite tenders for a new
at Oxbridge Cemetery. Plans, etc., at
Borough Engineer's Office, Victoria-build
Stockton-on-Tees.

May 27. — **Ashby Woulds.** — Materia
Supply to the U.D.C. of road materials,
Mr. J. W. Rowley, Surveyor to the A
Woulds U.D.C., Hartshorne-road, Woodvil

May 29.—**Stamford.**—Granite.—Supply t
T.C. of broken granite during the months
June, 1916, to March, 1917, inclusive.
Fredk. R. Ryman, A.M.Inst.C.E., Borough
veyor and Engineer, Town Hall, Stamford.

May 30.—**Salford.**—Tar Spraying.—For
spraying about 14,000 sq. yds. of macadam
Particulars from the Borough Engineer,
Hall, Salford.

June 2.—**Cannock.**—Sewer.—For the
vision, laying, and jointing of about 319
of 9-in. diameter stoneware pipe sewers
other incidental works. Drawings, etc., o
Robert Blanchard, Engineer and Surv
Council Offices, Cannock, Staffs. Deposit,

June 3. — **Worsborough.** — Granite,
Supply to the U.D.C. of broken granite,
dross, dross chippings, and fine lime
asphalt, during the year ending Decembe
1916. Form of tender of Mr. J. Whitaker,
veyor to the Council, Saville House,
borough Bridge.

June 5.—**Auckland.**—Sewer.—For prov
and laying down about 389 yds. of 9-in.
earthenware pipe sewer, and the relayi
about 244 yds. of 9-in. cast-iron pipes, to
with manholes, etc., at Evenwood, for the
Plans, etc., of Mr. J. T. Robson, P.A
Sanitary Surveyor, 9, Cradock-street, B
Auckland.

June 5.—**Hebburn.**—Tar Macadam Roa
etc.—For laying tar macadam roadway, ch
ling, etc., in Tharsis-road, Hebburn, fo
U.D.C. Form of tender at the Surveyor's
Argyle-street, Hebburn.

June 10.—**Alvaston and Boulton.**—Mate
—Supply to the U.D.C. of road materials.
of tender from Mr. Wm. Jno. Holbrook,
to the Council.

Auction Sales.

* May 30.—**Ware.**—Messrs. Morris &
will sell by auction, on the premises, a
maker's machinery and plant.

* June 5. — **Tunbridge Wells.** — M
Brackett & Sons will sell by auction, o
premises, the stock and plant of a builder.

* June 14.—**Hayes.**—Messrs. Fuller, H
Sons, & Cassell will sell by auction, o
premises, wood working machinery, engin
and foundry plant, coachbuilder's stock.

[Those with an asterisk (*) are advertised in this issue.]

CES CURRENT OF MATERIALS.

ng to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

our last issue sheet lead has been reduced and dvanced.—Ed.

r aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest est. Quality and quantity obviously affect prices t which should be remembered by those who se of this information.

BRICKS, &c.

r 1000 Alongside, in River Thames.	£ s. d.
ocks	2 0 0
Stocks for Facings	2 12 0

1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
s	1 10 0	Best Blue Pressed Staffordshire	5 0 0
Fareham	3 12 0	Do. Bullnose	5 5 0
ed Pressed on Facing	5 5 0	Best Stourbridge Fire Bricks	4 15 0

BRICKS—

White,		D'ble Str'tch'rs	18 17 6
, and		Double Headers	15 17 6
Glazed chers	13 7 6	One Side and two Ends	19 17 6
s	12 17 6	Two Sides and one End	20 17 6
Bullnose 4½ in.	16 17 6	Splays and Squints	18 7 6

econd Quality £1 per 1,000 less than best.

	s. d.	
Ballast	8 3	per yard, delivered.
and Pit Sand	8 6	,, ,, ,,
ashed Sand	9 6	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
rtland Cement	2 5 0	..	2 8 0

2 1s. alongside in 80-ton lots.

ete 2s. 6d. per ton extra on above.

ound Blue Lias Lime .. 1 5 6 at rly. depôt.

–The cement or lime is exclusive of the ordinary charge for sacks.

one Lime .... 18s. 0d. per yard delivered.

idge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
STONE—delivered in railway trucks at bourne Park, Paddington, G.W.R., or Lambeth, G.W.R., per ft. cube	1 7
delivered in railway trucks at Nine Elms, S.W.R., per ft. cube	1 8¾
delivered on road waggons, at Nine Elms t	1 9¼

ND STONE—

n Whitbed, in random blocks of 20 ft. rage, delivered in railway trucks at stbourne Park, G.W.R., South Lambeth, V.R., or Nine Elms, or L. & S.W.R., per cube	2 5½
o. delivered on road waggons at Pimlico arf or Nine Elms Depôt, per ft. cube	2 6½

basebed, 2d. per ft. cube extra.

BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
r in blocks	2 0	Closeburn Red Freestone	2 2
blocks	1 7½		
l in blocks	2 4	Red and White Mansfield Random block	2 9
Dale in s	2 5	Yellow Magnesian Limestone do. do.	3 3

TONE—*Robin Hood Quality.*

er Ft. Cube, Delivered at Railway Depôt.	s. d.
l random blocks	3 4
er Ft. Super., Delivered at Railway Depôt.	
wn two sides landings to sizes (under super.)	2 5
bbed two sides, ditto	2 8
vn two sides slabs (random sizes)	1 0½
2½ in. sawn one side slabs (random sizes)	0 8½
2 in. ditto, ditto	0 6¾

ORK—

er Ft. Cube, Delivered at Railway Depôt.	
l random blocks	3 0
er Ft. Super., Delivered at Railway Depôt.	
n two sides landing to sizes (under 40 ft.)	2 3
bed two sides ditto	2 7
vn two sides slabs (random sizes)	1 0
-faced random flags	0 5

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
chine-made tiles or hand-made sand- tiles from either Broseley or rdshire district	2 12 6
ntal ditto	2 15 0
valley tiles (per dozen)	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£ s. d.
e Bangor Slates, 20 by 10	11 16 0
lity ,, ,,	11 10 0
,, 16 by 8	5 15 0
e Portmadoc, 20 by 10	11 13 6
lity ,, ,,	11 3 6
,, 16 by 8	5 15 0

WOOD.

r prices should be confirmed, as the market is *changing daily.*

ILDING REDWOOD.

nported sizes.	Per standard. £ s. d.		£ s. d.
4 in. by 12 in., 4 in. 1 in., 3 in. by 11 in., by 9 in., and 2 in. 11 in.	33 10 0	..	34 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard. £ s. d.		£ s. d.
Deals: 3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32 10 0	..	33 10 0
Battens: 2 in., 2½ in., and 3 in. by 8 in.	31 10 0	..	32 10 0
2 in., 2½ in., and 3 in. by 7 in.			
2 in., 2½ in., and 3 in. by 6 in.			
2 in., 2½ in., and 3 in. by 5 in.			
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.			
3 in. by 4 in., and 3 in. by 4½ in.			
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0		more than battens.
¾ in.	1 0 0		
Seconds: building quality deals, battens, boards, and scantlings	1 0 0		less than best
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 10 0 0	..	—
Seconds do. do.	9 10 0	..	—
9 in. to 10 in. do.	8 10 0	..	—
6 in. to 8 in. do	8 0 0	..	—
Stocks very limited.			
Sawn pitch pine logs (about 35 cu. ft. average)	Per load. 12 0 0	..	13 10 0
Do. 6 in. to 10 in.	10 0 0	..	11 0 0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6 10 0	..	7 0 0
Best Pitch Pine Deals	Per standard. 34 0 0	..	35 0 0
Under 2 in. thick	0 10 0		extra.

JOINERS' WOOD.

	£ s. d.		£ s. d.
White Sea First Quality Red:			
4 in. by 11 in.	39 0 0	..	40 0 0
3 in. by 11 in., and 2 in. by 11 in.	38 0 0	..	39 0 0
4 in. by 9 in.	37 0 0	..	38 0 0
3 in. by 9 in., and 2½ in. by 9 in.	36 0 0	..	37 0 0
9 in. by 11 in. boards	1 0 0		more than deals.
7 in. and 8 in. battens	33 0 0	..	34 0 0
7 in. and 8 in. boards	1 0 0		more than battens.
Third quality	2 0 0		less than best.
Archangel White Deals—			
Best 3 in. by 9 in. and 10 in. and 11 in.	36 0 0	..	37 0 0
Seconds, do.	2 0 0		less than best.
U.S. Battens	30 0 0	..	32 0 0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—			
1¼ in. by 6½ in. planed and shot	Per square actual. 1 16 0	..	1 19 0
1¼ in. by 6½ in. planed and matched	1 16 6	..	1 19 6
1 in. by 6½ in. planed and shot	1 9 0	..	1 12 0
1 in. by 6½ in. planed and matched	1 9 6	..	1 12 6
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1 4 0	..	1 6 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
⅝ in. by 6½ in. do.	1 0 0	..	1 1 0
Columbian or Oregon Pine, best quality	Per standard. 42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0		upwards.
Oddments	39 0 0		,,
Seconds, regular sizes	43 10 0		,,
Oddments	37 10 0		,,
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch.	0 1 0	..	0 1 3
⅝ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Selected, Figury, per ft. super, as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per ft. super, as inch	0 1 0	..	0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

IRON—	Per ton, in London. £ s. d.		£ s. d.
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0

METALS (*Continued*).

IRON—	Per ton, in London. £ s. d.		£ s. d.
Mild Steel Bars	18 0 0	..	18 10 0
Steel Bars, Ferro-Concrete quality, £18 basis price.			*
Hoop Iron, basis price	20 0 0	..	20 10 0
,, ,, Galvanised	33 0 0	..	—
(* And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	20 10 0	..	21 0 0
,, ,, 24 g.	21 10 0	..	22 0 0
,, ,, 26 g.	22 10 0	..	23 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	33 0 0	..	—
,, ,, 22 g. and 24 g.	33 10 0	..	—
Ordinary sizes to 26 g.	36 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g.	23 15 0	..	—
Best Soft Steel Sheets, 26 g.	25 10 0	..	—
Cut Nails, 3 in. to 6 in.	24 0 0	..	25 0 0

(Under 3 in., usual trade extras.)

Galvanised prices are nominal under the present exceptional conditions.

LEAD, &c.

Delivered in London.

		£ s. d.		
LEAD—Sheet, English, 4 lb. and up		40 10 0	..	—
Pipe in coils		41 0 0	..	—
Soil pipe		44 0 0	..	—
Compo pipe		44 0 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—				
Strong Sheet	per lb.	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
Copper nails	,,	0 1 6	..	—
Copper wire	,,	0 1 8	..	—
BRASS—				
Strong Sheet	,,	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
TIN—English Ingots	,,	0 2 0	..	—
SOLDER—Plumbers'	,,	0 0 11	..	—
Tinmen's	,,	0 1 2	..	—
Blowpipe	,,	0 1 4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
,, fourths	4¾d.	32 oz. thirds	8¾d
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
$\frac{3}{16}$ Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 2
,, ,, ,, in barrels	,,	0 3 3
,, ,, ,, in drums	,,	0 3 6
Boiled ,, ,, in barrels	,,	0 3 5
,, ,, ,, in drums	,,	0 3 9
Turpentine in barrels	,,	0 3 8
,, in drums	,,	0 3 11
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		58 0 0
Red Lead, Dry	per ton	58 0 0
Best Linseed Oil Putty	per cwt.	0 12 0
Stockholm Tar	per barrel	4 5 0
Filocol	per cwt.	0 9 6
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	73 0 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TRADE NEWS.

Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester, have recently supplied their patent Manchester stoves to the Sealburn Sanatorium, Ryton-on-Tyne.

Under the direction of Mr. Robert Frew, architect, Irvine, Boyle's latest patent "air-pump" ventilators have been adopted for a new hosiery factory, Troon, N.B., and hosiery factory, Irvine.

We are informed that Messrs. Hughes, Bolckow, & Co., Ltd., of Middlesbrough, Newcastle, and Blyth, have purchased the business as carried on by the Andrews-Hawksley Patent Tread and Engineering Company, Columbia Works, Poplar, E., and that the plant and machinery in connection therewith have been removed to Battleship Wharf, Blyth, where in future the business of manufacturing these stair treads, which have been before the public for a great number of years, will be carried on. We understand that in connection with the manufacture of these patent treads Messrs. Hughes, Bolckow, & Co., Ltd., will use their old seasoned battleship timber oak and teakwood.

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TO CORRESPONDENTS.

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All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

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SYDNEY PRIDAY,
KING WILLIAM HOUSE, 2a, EASTCHEAP, LONDON, E.C.
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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

BLANDFORD (Dorset).—For the tar-spraying and gritting of about 25,000 yds. super. of main and other road surfaces, for the Corporation of Blandford Forum, Dorset. Mr. R. Lake, Borough Surveyor:—

Fothergill Bros., Castle-street, Exeter, 1⅝d. per super. yard.

BRIGHTON.—For painting, distempering, and tarring the external parts of the Warren Farm Schools, farm buildings, cottages, etc., for the Brighton Board of Guardians. Mr. W. H. Overton, F.S.I., M.S.A., architect, 22, Ship-street, Brighton:—

W. Brown & Sons	£327	0
Gates & Son	299	10
A. Chilton	297	0
Bostel Bros.	290	0
J. Oliver & Sons	250	9

[Tenders referred for consideration.]

FARNBOROUGH.—For the erection of thirty small houses in Farnborough, Hants, for the Farnborough (Hants) Housing Syndicate. Mr. A. H. Dungay, architect and surveyor, Alpha-chambers, Alexandra-road, Farnborough, Hants:—

J. Smith & Sons, Ltd.	£22,590
Myall Bros.	16,950
D. R. Dunthorn	16,590
W. Watson	16,392
Sherfield Bros.	16,092
J. B. Seward, Ltd.	15,645
Crosby & Co.	15,540
O. P. Drever & Son, Ltd., Kettering*	14,100

KIRKCALDY.—For painter work at property, 89, Links-street, for the Town Council. Quantities by Mr. Jas. L. Lumsden, Burgh Surveyor:—

H. Stewart	£24	4	5
A. & D. Blewes	23	18	9
D. Lowden	19	13	3
G. Gourlay & Son	18	0	0
D. B. Stenhouse, 27, Kirkloynd*	15	3	7

KIRKCALDY.—For the laying of a quantity of granolithic at the new sanatorium, for the Town Council. Mr. J. L. Lumsden, Burgh Surveyor:—

A Hutchison & Son	£134	17	0
R. Page	99	3	8
T. Forrester, 254, St. Clair-street*	86	8	8

LONDON.—For repairs to the roof of the forage store at Shot Tower Wharf, for the Westminster City Council:—

Burton Bros.* £27

PENZANCE.—For the new buildings in con tion with the reconstruction of the Workh Laundry, for the Board of Guardians:—

R. Tonkin, Tredawe* £199 10

STROOD.—For the erection of fifty house Wainscott for Admiralty workmen, including making up of roads and paths and the prov and fixing of fences, for the Strood Rural Dis Council:—

W. R. Barton & Son, Gravesend* .. £15,02

WEYMOUTH.—For supply to the Town Co of Portland cement during the period en March 31, 1917:—

British Portland Cement Manufacturers, L 49s. 8d. per ton, delivered Weymouth Stat

WEYMOUTH.—For repairs at the Duke Cumberland Hotel, for the Town Council:—

T. Sargent	£21	18
L. Higgins	20	1
R. Crumbleholme & Son*	17	1

WEYMOUTH.—For repairs and heating N Bank-buildings, for the Town Council:—

Repairs.

J. A. Parsons, Ltd.	£59	10
A. E. Whettam	58	0
Pates Bros.*	54	10

Heating.

R. Crumbleholme & Son	19	4
T. Sargent*	18	8

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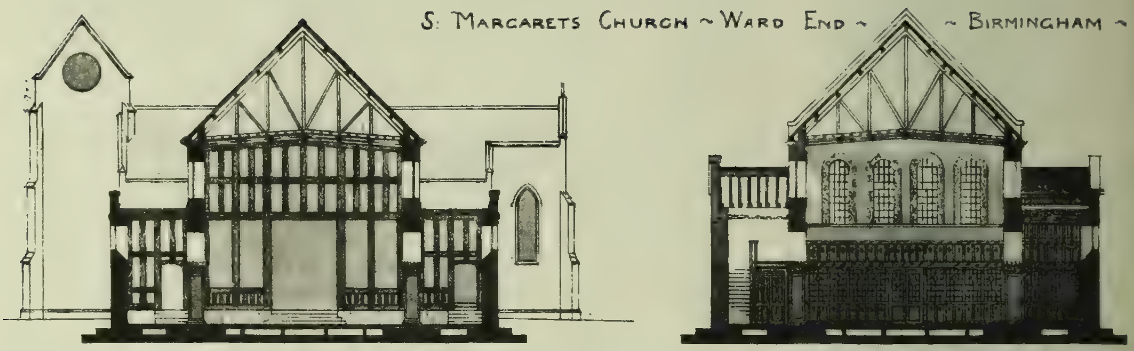
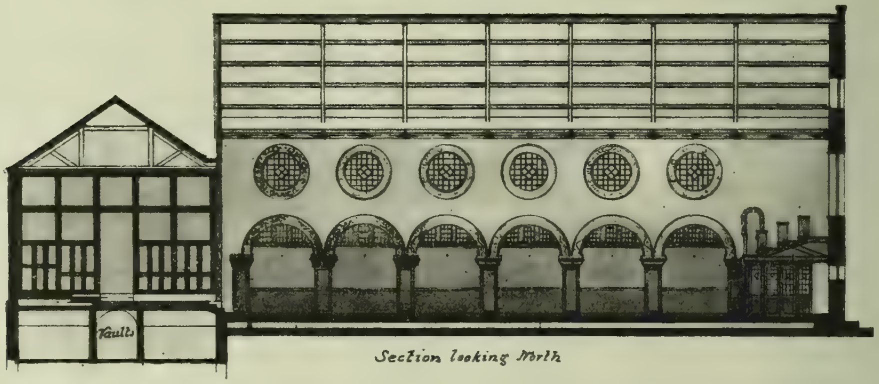
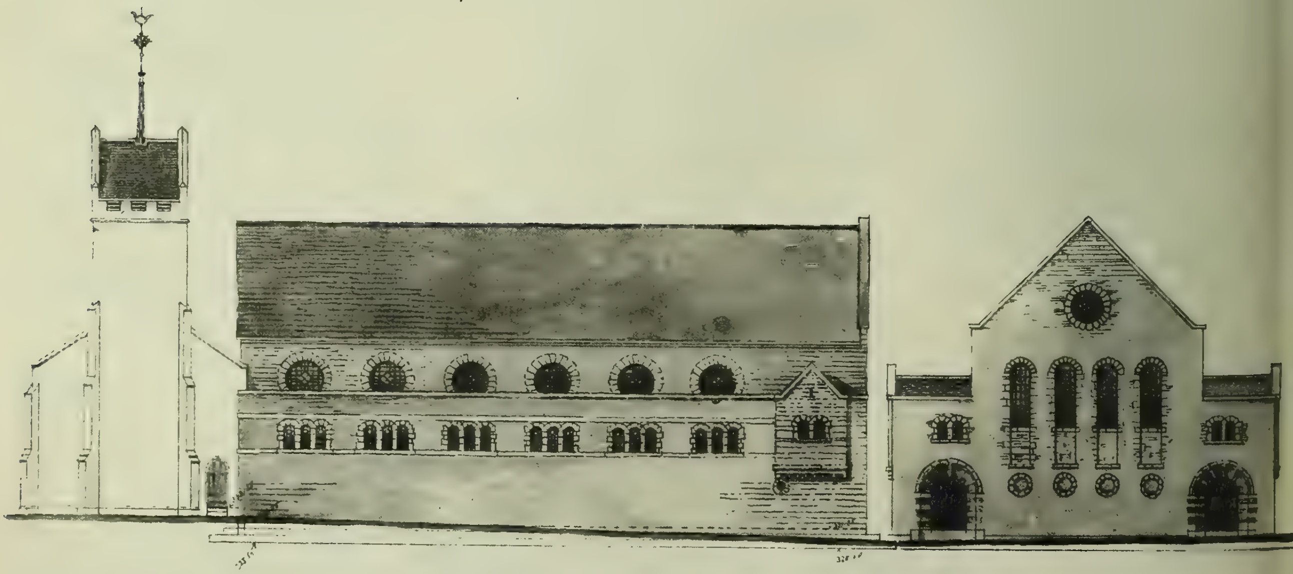


Section looking East. *Section looking West.*

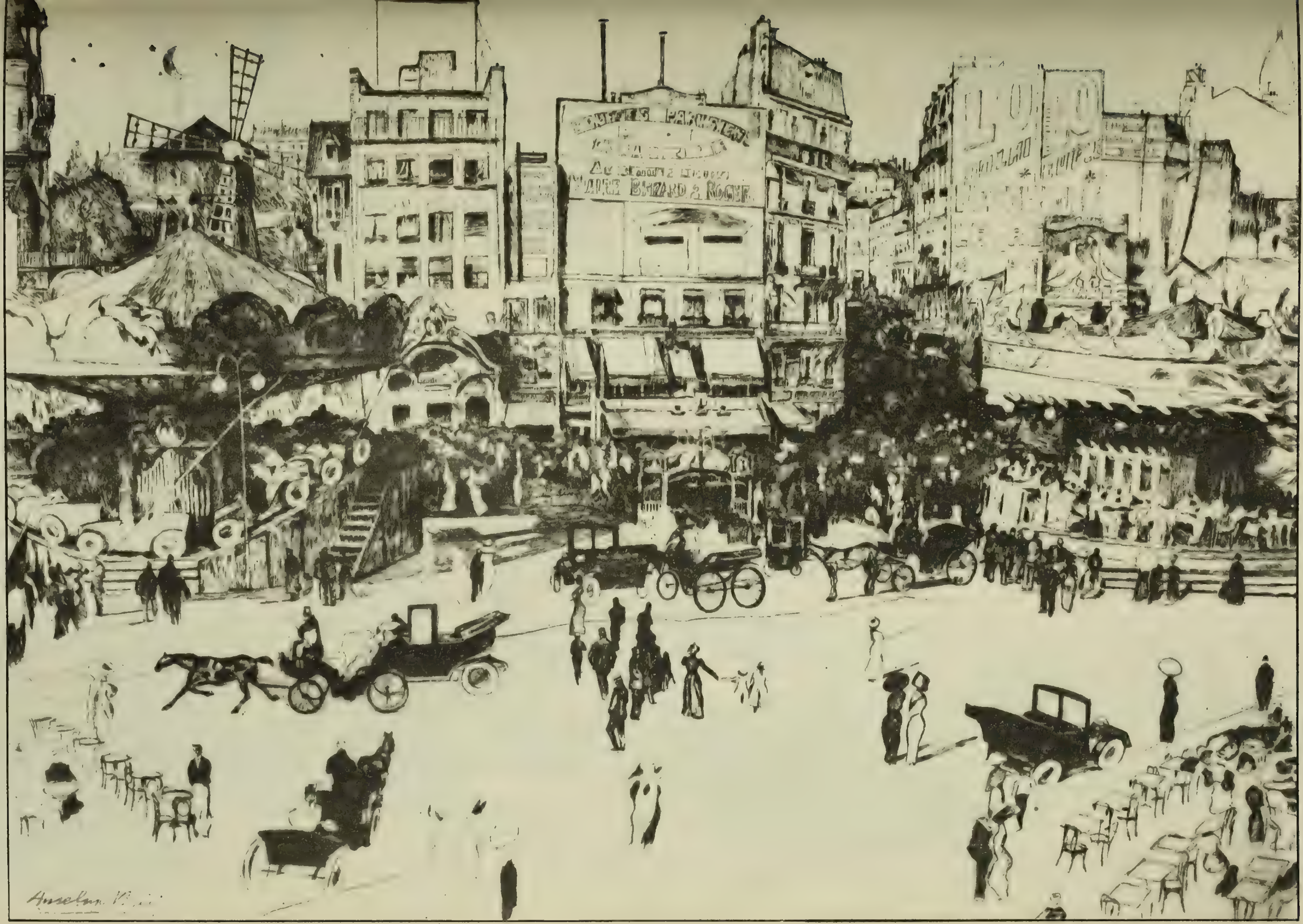


Section looking North

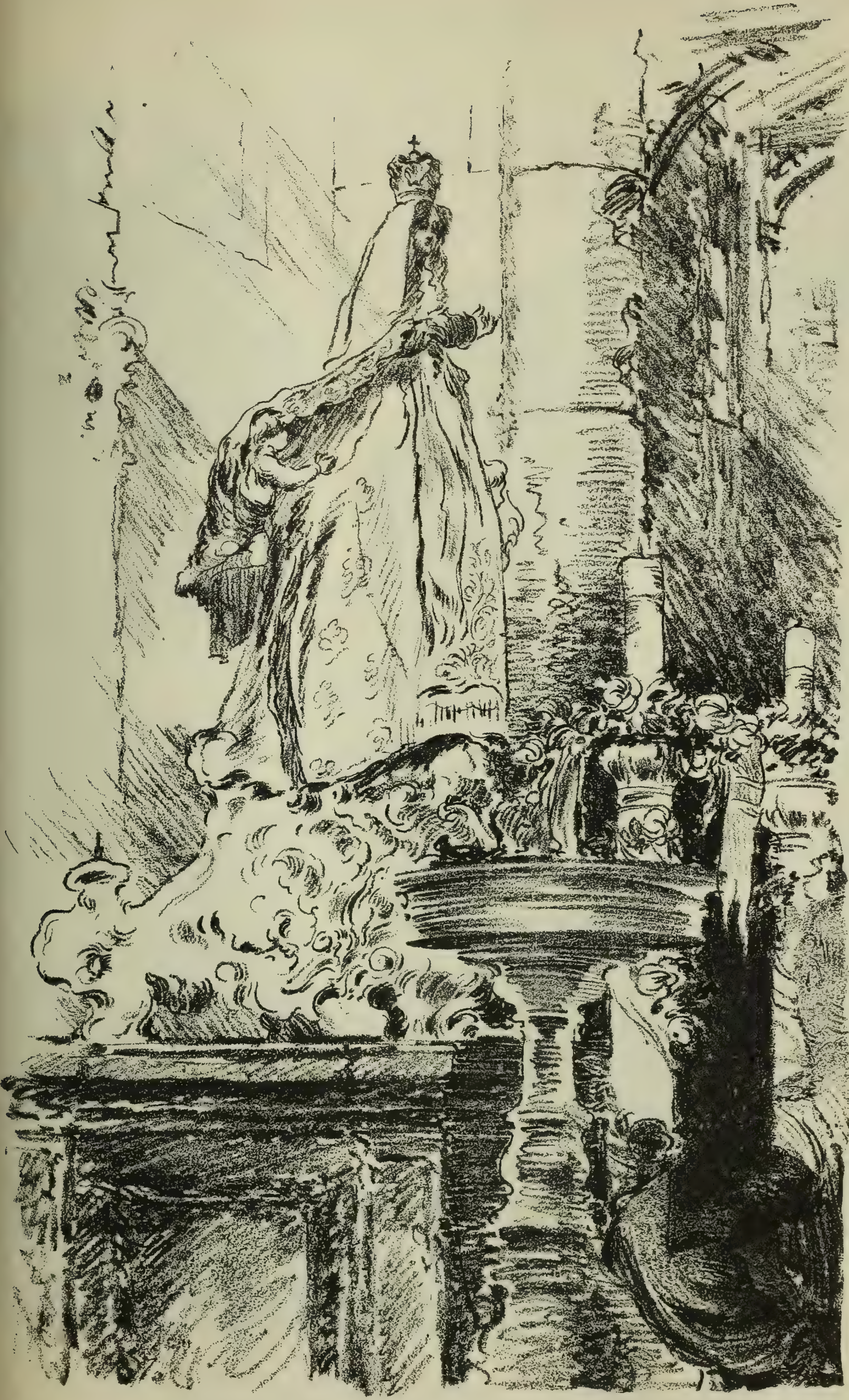


Elevation to Side Road *Elevation towards Road.*

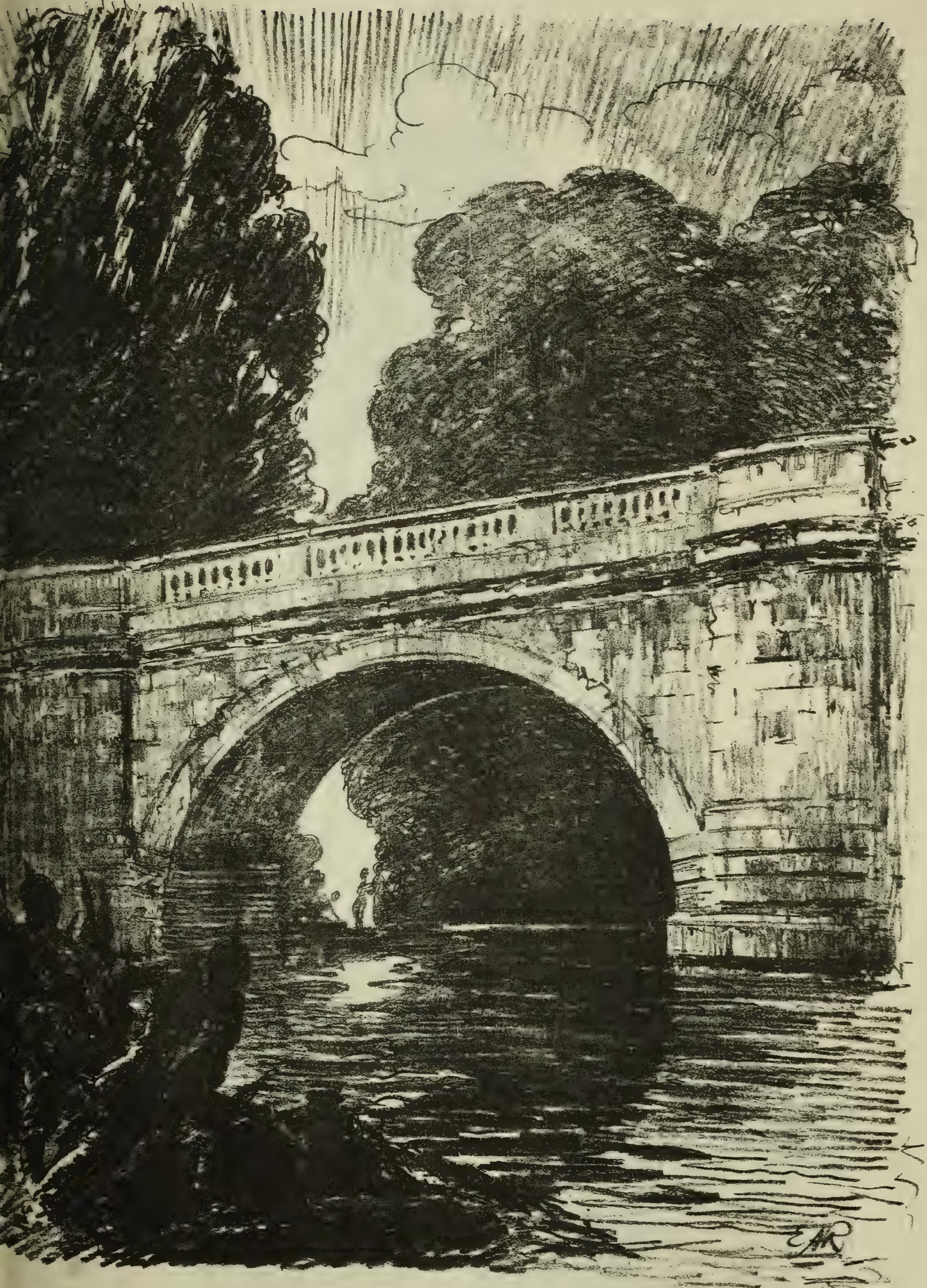
ST. MARGARET'S CHURCH, WARD END, BIRMINGHAM.—MR. C. E. BATEMAN, F.R.I.B.A., ARCHITECT.



MONTMARTRE.—FROM AN ETCHING BY ANSELMO BUCCI.



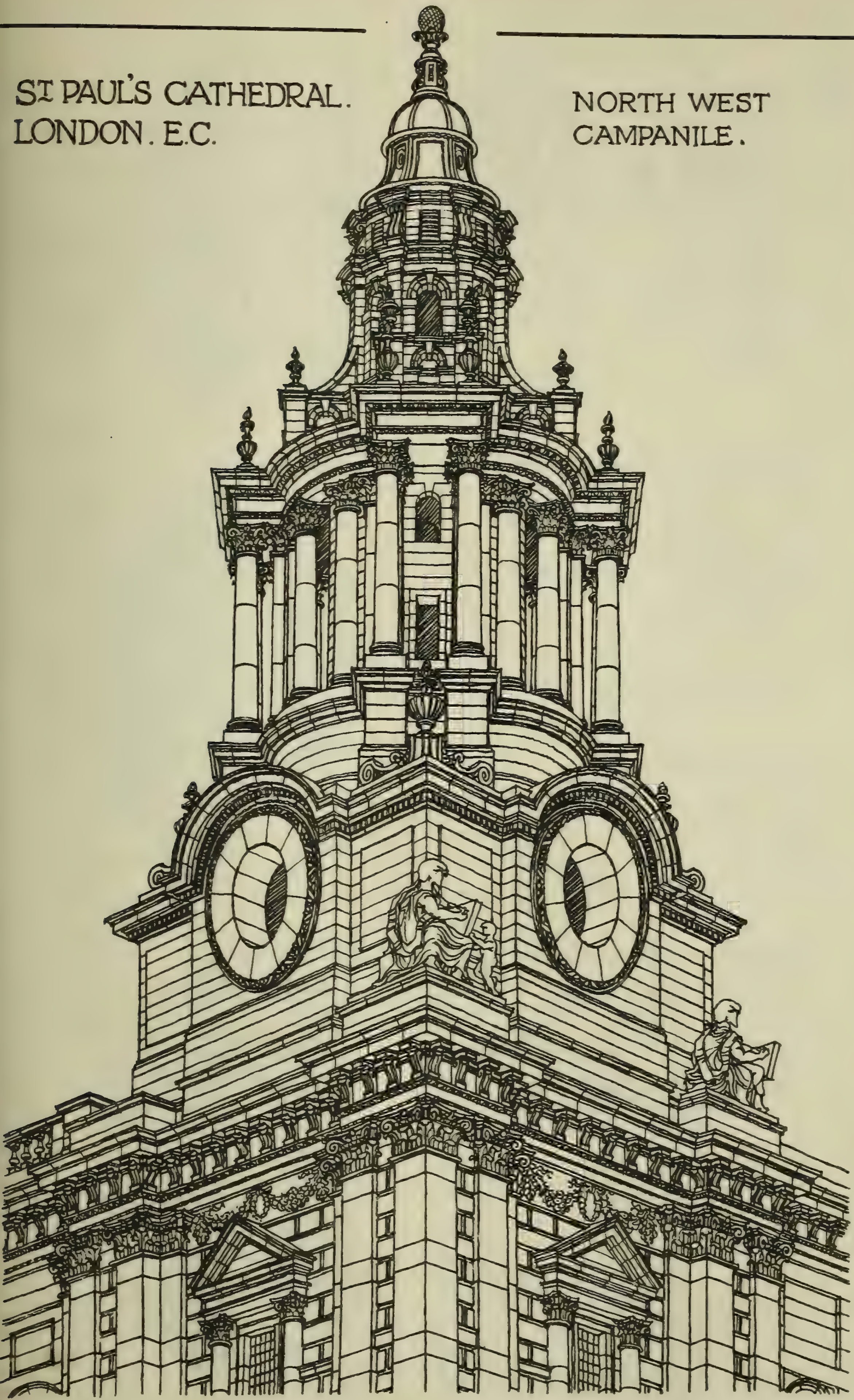
A BAROQUE MADONNA.—FROM A DRAWING BY MR. E. A. RICKARDS, F.R.I.B.A.



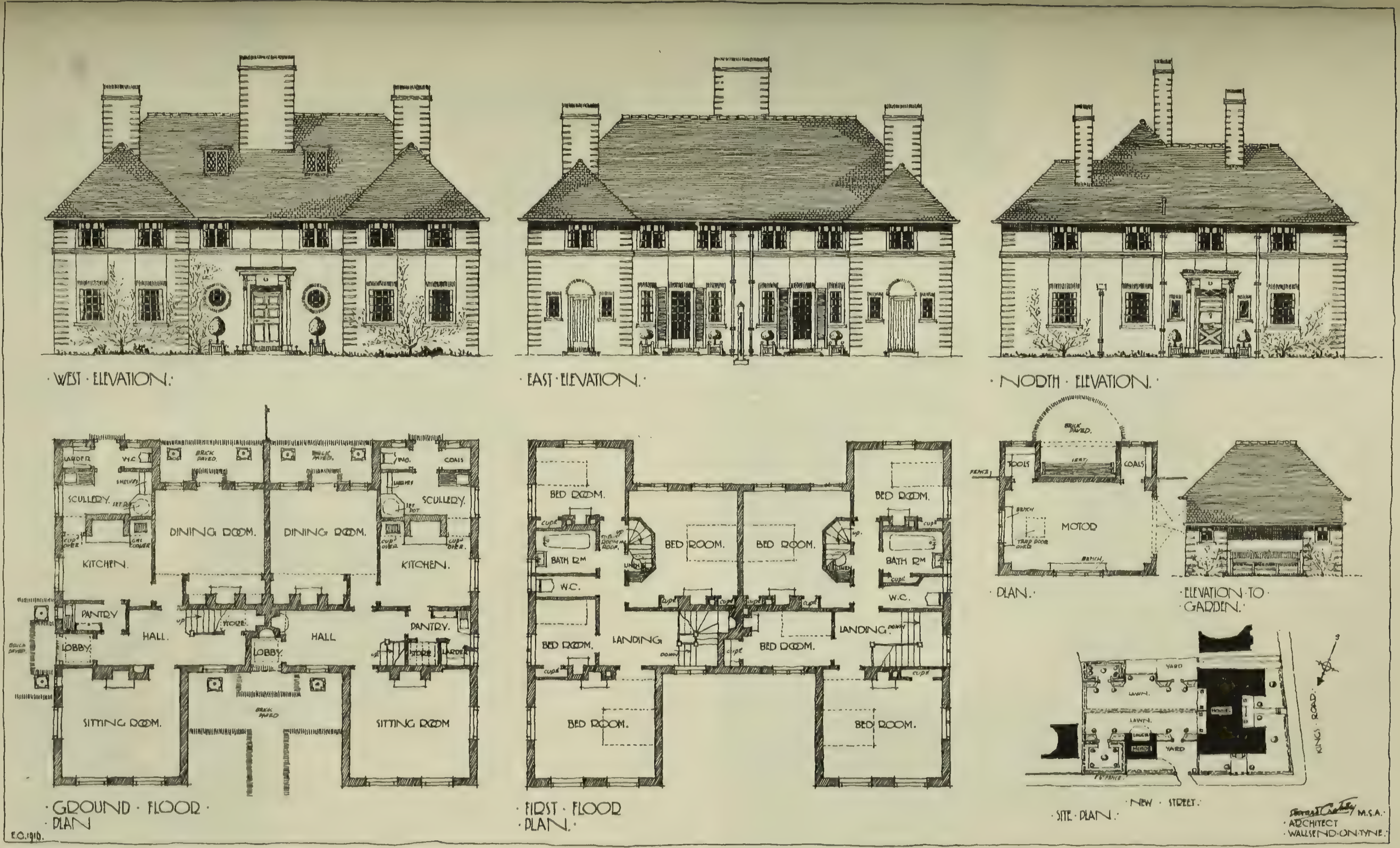
THE BRIDGE TO PEACE.—From a Drawing by Mr. E. A. Rickards, F.R.I.B.A.

ST PAUL'S CATHEDRAL.
LONDON. E.C.

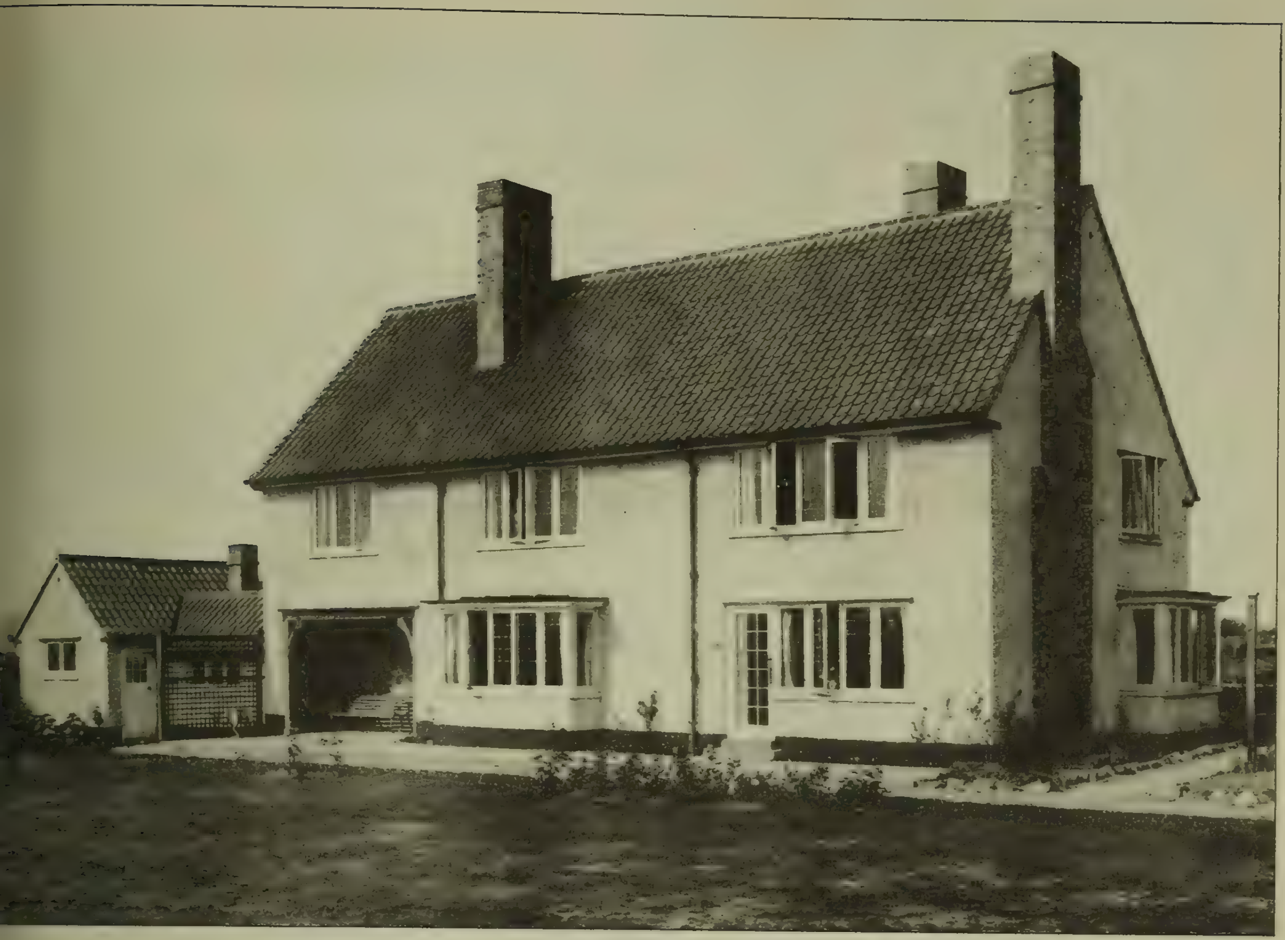
NORTH WEST
CAMPANILE.



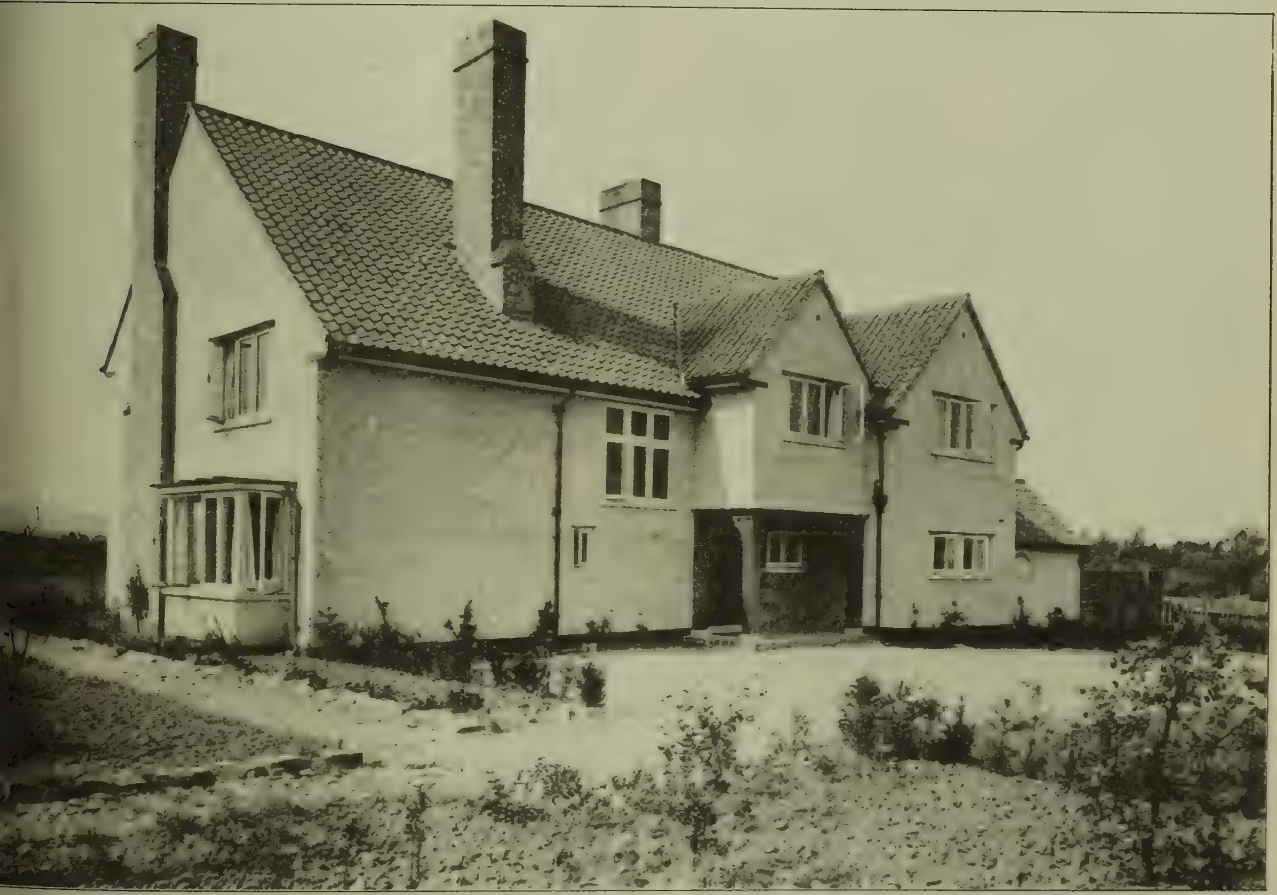
C. Harrold Norton del:



PROPOSED HOUSES AND GARAGE, WALLSEND-ON-TYNE.—MR. EDWARD CRATNEY, ARCHITECT.



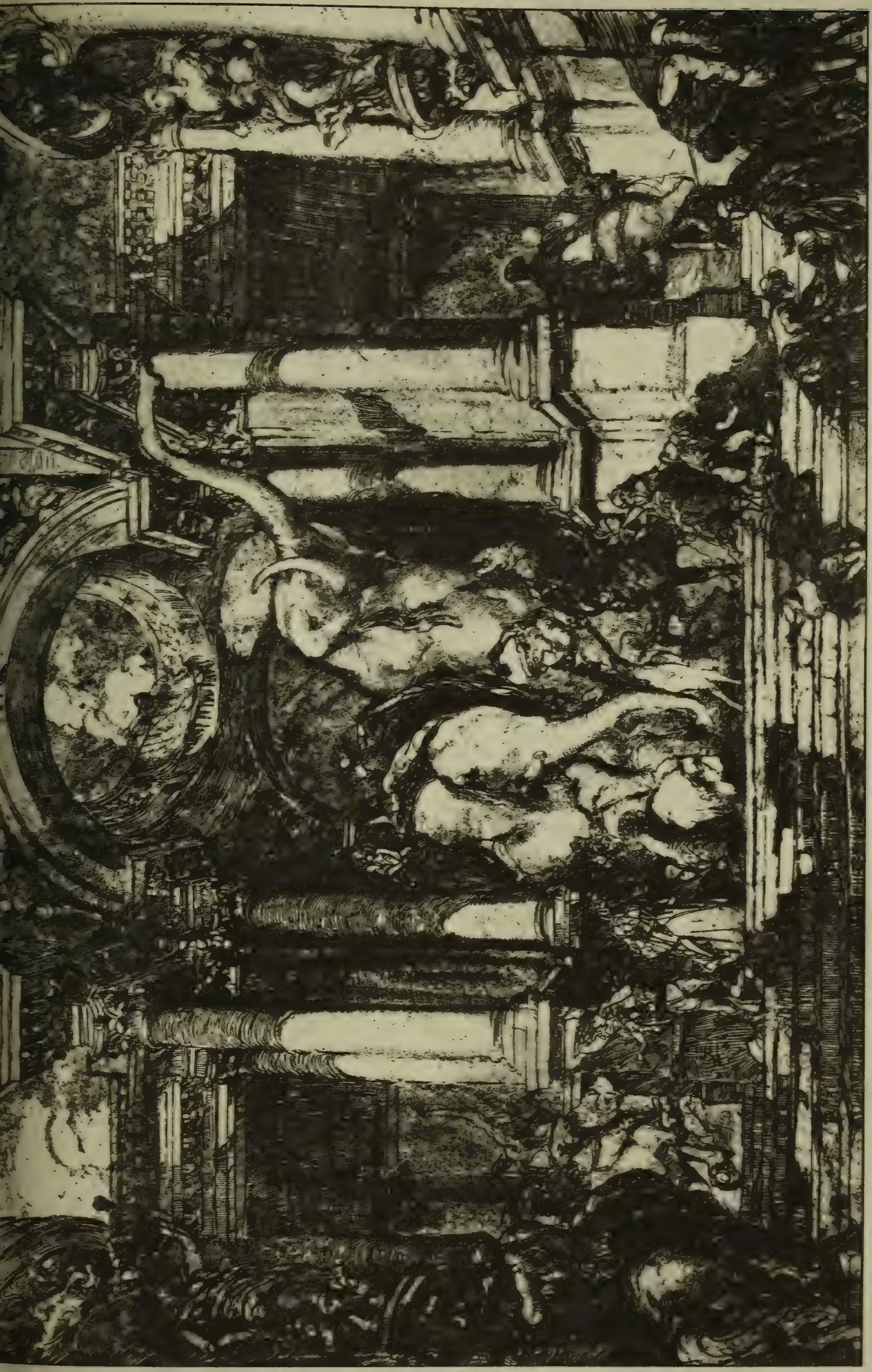
Garden Front.



Entrance Front.

DARIAN: STOCKSFIELD, NORTHUMBERLAND.—Mr. Edward Cratney, Architect.

Photo: Thos. Lewis, Ltd., Birmingham.



DESIGN FOR A DROP SCENE.—FROM AN ETCHING BY CESARE FRATINO.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

OL. CX.—No. 3826. JUNE 2, 1916.

THE QUICKSANDS OF CIVILISATION.

THE whole of the arts are an outcome of civilisation past and present, and on the permanency of civilisation they depend for their continued existence. When Louis XV. said "Après moi le déluge" he cynically expressed his conviction t future generations would have to pay heavily for the esses of a period in which misgovernment and corruption e rife—a price which involved the destruction of idreds of the historic houses of the courtly past, the ttering or destruction of art treasures, and the rebirth of dern France from the bloodshed and ashes of revolution. overthrow of Roman power by the barbarians set back clock of history for centuries, for the glories of the Italian aissance would not have seemed to compensate for the es which man and time had inflicted on the Imperial City hose who knew the nature and extent of Roman art and lisation.

So, too, Belgium and North-Eastern France cannot be for y generations what they were before the present outburst arbarian fury had damaged in a few months all that the of centuries had created; and it may be questioned whether kind has not lost more in the process of war and the aclysms of destruction which have marked the fall of pires than that which now remains to us. What is left to of ancient Egypt and Rome was not preserved because of respect felt by the conquerors, but owing to the physical culty of obliterating and destroying their colossal numents; but the same conditions do not apply to what kind has since built, as the fate of many a city has nonstrated in the last eighteen hundred years.

Nor is the destruction which follows war the only danger ch our buildings have to face, for another incentive is given the effect of growth of population and the conditions brought ut by the enormous increase in the value of urban property. arge proportion of our older churches in London occupy s which have become extremely valuable, and when to this dded the continual need of the Church for funds to carry its necessary work many an historic church may be said to built on the edge of a precipice. In lower New York the wth of the city frequently renders the demolition of buildings nty or thirty years old a good business proposition, and we e no reason to think the process is at an end yet. We may d as we think for posterity, but it becomes increasingly cult to predicate what the wants of that posterity will be. Government of London has passed through as many tean changes in fifty years as it did in several centuries viously, and the process is far from being ended now.

So whether a state of war or one of peace obtains forces estruction which affect architecture are always in operation, ch must cause speculation as to the possibility of devising thing which will be left untouched by the tides of truction and will enable us to preserve some of the itage of the past for the enjoyment of the future.

Though time is only relative, most of us would feel less erest in a building which we knew would have to be nolished in fifty years than one we think will serve its purpose many centuries; while it gives us keen satisfaction to know t a few of our London buildings escaped the Great Fire, we have for them an affection which partially depends on siderations outside their intrinsic merit.

It is interesting to consider whether the processes we have rred to will operate more and more quickly with the passage of time, or whether we can by any method attain to methods of living and working which will render war an impossibility and obviate the necessity for the continual alteration of our objective, which renders the work of the generation useless for that of the next.

As far as war is concerned, it may be hoped, and possibly reasonably expected, that we are in the midst of the last effort of nations to alter the destinies of Europe by means of conquest. It is quite conceivable that out of the present chaös the United States of Europe may in the course of another fifty or a hundred years take definite shape, and that the problems which its constituent nations will solve together will be the elimination of actual want and the exploitation of methods of production to attain this end.

But if the civilisation of Europe is to possess architecture which is to serve for future generations it must solve questions which our forefathers were only dimly aware of, if indeed they understood them at all. One of these is the ultimate population and area of our cities, for unless some approximate limits can be arrived at all means of communication, centres of distribution, and public buildings will be conceived on too magnificent or too mean a scale. The last involves the future necessity for destruction and the loss of the capital, the former waste and ill-directed effort. To architects especially these questions are important, as it is far easier to persuade the public to spend if the expenditure creates capital value than if it is a haphazard guess arrived at on insufficient data, as is too often the case now. We must do away with the possibility of hampering future generations by our mistakes if we are to gain the consent of the public to great and far-reaching improvements, just as we should arrive at some *modus vivendi* between capital and labour if both are to have full employment in the production of the more permanent forms of artistic expression.

Mankind will tend more and more to preserve wealth in portable and easily realisable forms if they feel that there is no certainty that socialistic legislation will not be introduced, stripping them of profits to be made from land and building. Want of reasonable security will make us a nation of middlemen anxious to secure quick profits on trading transactions, and ready at any moment to transfer wealth to countries where freer conditions obtain.

On the other hand, it is all-important that a means should be found of convincing labour that there is no wish or intention to exploit it unfairly, and it is likely that the payment of a greater share of profits in the form of wages would lead to increased production if the distrust which is the curse of industry and the cause of recurrent strikes were eliminated. Few of us would buy the greatest masterpieces if we knew that in twenty years their colours would inevitably fade from the canvas; and in the same way we cannot convince people that it is wise to invest money in land or building if they feel its saleable value may be diminished by legislative enactments or by changing circumstances. And these factors should be taken into consideration by all those who are interested in the production of art, for they have a more direct and vital interest in the well-being of the community than almost any other class. The operator in stocks, the merchant, and those who cater for the daily wants of the people are, it is true, affected by conditions of instability, but they are not altogether dependent on the conditions which obtain in any one country, whereas the architect and to a large extent the sculptor and even the painter are if their work is of a decorative character.

Instead, therefore, of the "artist" being divorced from practical life and living in the clouds of fancy, he is more vitally interested than others in the fruits of good government and in the closing of the avenues which lead to dissension and unrest.

The quicksands which surround civilisation are those of war, of social unrest and instability, and the dangers due to a failure to consider the effect of the growth of population; and all these problems are of the first importance to those pract the arts who are anxious to demonstrate that it is reaso to expend money in beautifying our cities and our lives. T who practise the æsthetic arts should be enthusiasts, but sh not lose sight of the fact that it is wise to master the prac knowledge which enables them to advise others when and to spend wisely. Comparatively few have use for art luxury; many may be inclined to expend money on it if it be shown to be a reasonable investment.

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NOTES.

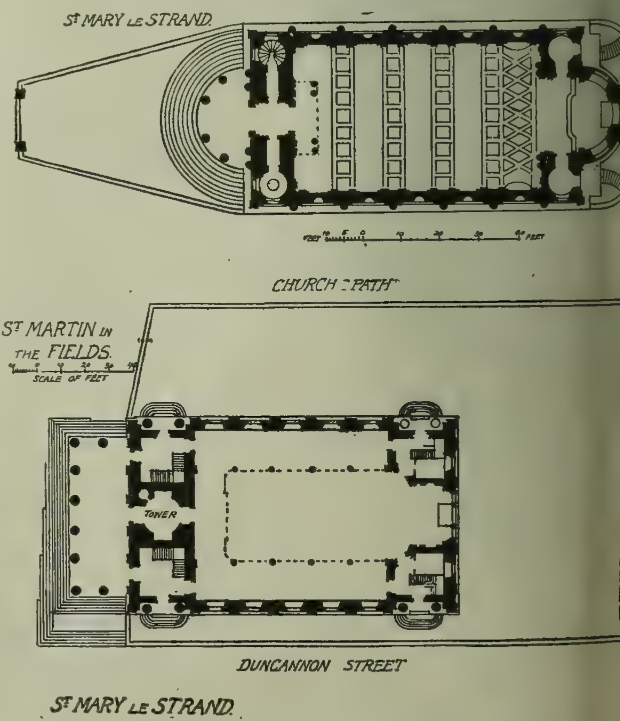
The Preservation of Stained Glass. SEVERAL letters have been written to the Press suggesting safeguards which should be adopted to protect old stained-glass windows from the risks of war. A correspondent in a letter to the *Daily News* recalls a very simple method adopted during the Siege of Paris—that of pasting strips of paper across the glass to save it from the dangers of concussion. This is undoubtedly an excellent and easily applied safeguard which should not be neglected. Other writers have advocated the fixing of boarded screens a few feet in front of the windows, which undoubtedly would form a good protection. Naturally, where glass is of great value and the expense justified, the removal of it to a position of safety is better than anything else; but it is suggested that in such cases a tracing should be made of every panel so that any piece of glass which becomes detached could be refixed in its original place. But, though it is wise to take precautions, we hope they may not prove to be necessary.

One-Man Businesses and Compulsory Service. A FIRM of company registration agents call attention to the many cases of personal hardship which are caused by calling up men who conduct their own businesses for military services. It is pointed out that it will be frequently easy to save the situation by converting the business into a limited liability company in which the vendor will take a number of fully-paid-up shares and become a director, practically retaining the business in his own hands; while he will be relieved from considerable anxiety by the knowledge that he will not be personally responsible for the company's debts, and in a number of smaller cases the wife of the proprietor will be able to carry on the business. While many can no doubt obtain relief by the methods suggested, the times are not favourable for the formation of companies, limited or otherwise, and we are afraid that architects will not be able to escape their difficulties by the means suggested, though it is possible that the formation of partnerships might help a few of those whose position is affected.

Butchers' Shops and Monumental Masons. WE have often heard it said that in the interests of art and of beauty the butcher should be obliged to display the carcasses he sells in a closed yard, and certainly no effort on the part of the architect can disguise the unsightliness of a beautiful display of prime joints, and whether such displays are "home-grown products" or New Zealand or Argentine importations they are equally distressing to eye and æsthetic sense. But with the same measure with which we judge and condemn such displays we must judge and condemn the appalling and dispiriting exhibitions of the monumental mason's art which so constantly meet the eye. The idea of death, so solemn and often so beautiful, is vulgarised by the coarse pretentious collection of ill-designed memorials—the broken crosses, pretentious urns, and other reminders of the stock-in-trade of the monumental mason. They are extravagant, for they have not the justification of beauty; the ready-made inscriptions and meaningless symbolism savour more of bathos than pathos, and all the time we have in every old churchyard perfect models to guide us if we need guidance. Our forefathers looked on death as the natural release from life, a thing to be commemorated fittingly, but not to be unduly grieved over; and the spirit of a former age made possible such epithets as that written above Vanbrugh's grave—"Lie heavy on him, Earth, for he Laid many a grievous weight on thee"—while the memory of the greatest of our English architects inspired the immortal words "Si monumentum requiris, circumspice."

The New English Art Club. THE fifty-fifth exhibition of the New English Art Club is an exceptionally good one, much of the work exhibited being remarkable for its freshness and vigour, while there is a smaller amount of eccentric work than usual. Mr. Augustus John is seen at his best in his portrait of Mr. H. A. Barker (No. 32) and a very fine decorative study entitled "The Lady by the Lake" (No. 36), and Mr. David Muirhead in his study of a girl at a window (No. 14 girl at a mirror (No. 16). Mr. Ambrose McEvoy's portraits are in with life, charm, and a delightful appreciation of colour. Mr. Wi Orpen exhibits two large paintings, "A Man from the Arran Isla (No. 3) and the "Holy Well, Ireland" (No. 22), which show power of striking composition and decorative effect. Alth somewhat mannered, the two decorative pictures of Mr. En Mooney (Nos. 232 and 234) are very charming and fresh in e The exhibition is full of good things, the Black-and-White R as usual, being very interesting. Mr. Francis Dodd sends a etching of St. Mary-le-Strand (No. 52), in which he shows arch tural knowledge and mastery of chiaroscuro. Mr. Muirhead and Mr. C. Marisco Pearse contribute excellent renderings of a tectural subjects. The exhibition as a whole is better anything we have seen for a long time.

The "British Architect." WE are glad to welcome our contemporary *British Architect* in its new form of a mo magazine, for it has throughout its history r tained a high professional and artistic stan Its criticism has never been ill-natured, and it has always exte quick recognition to merit apart from position. It has helpe encourage many at the difficult moment when recognition do much for the youthful aspirant to fame; while its editor, Mr. R Davison, is among the most deservedly respected and most po of architectural critics. It has been the free lance of architec journalism, but has never allowed controversy to become embitt Its first number as a monthly publication contains an exce article on the subject of Charing Cross Bridge and a pleasing by Mr. Voysey on "Fashion in Architecture," which, needless to he condemns. We hope our contemporary will have a long successful career in its new form, for it has filled in the past a u place which has not been covered by any other architectural jou and, if it has occasionally ploughed a lonely furrow, its e has shown judgment in selecting a beautiful field. In these da revived academical thought it is well to have the freer critici those who judge by results apart from the methods of which are the outcome.



Wren's Churches. (*See page* 397.)

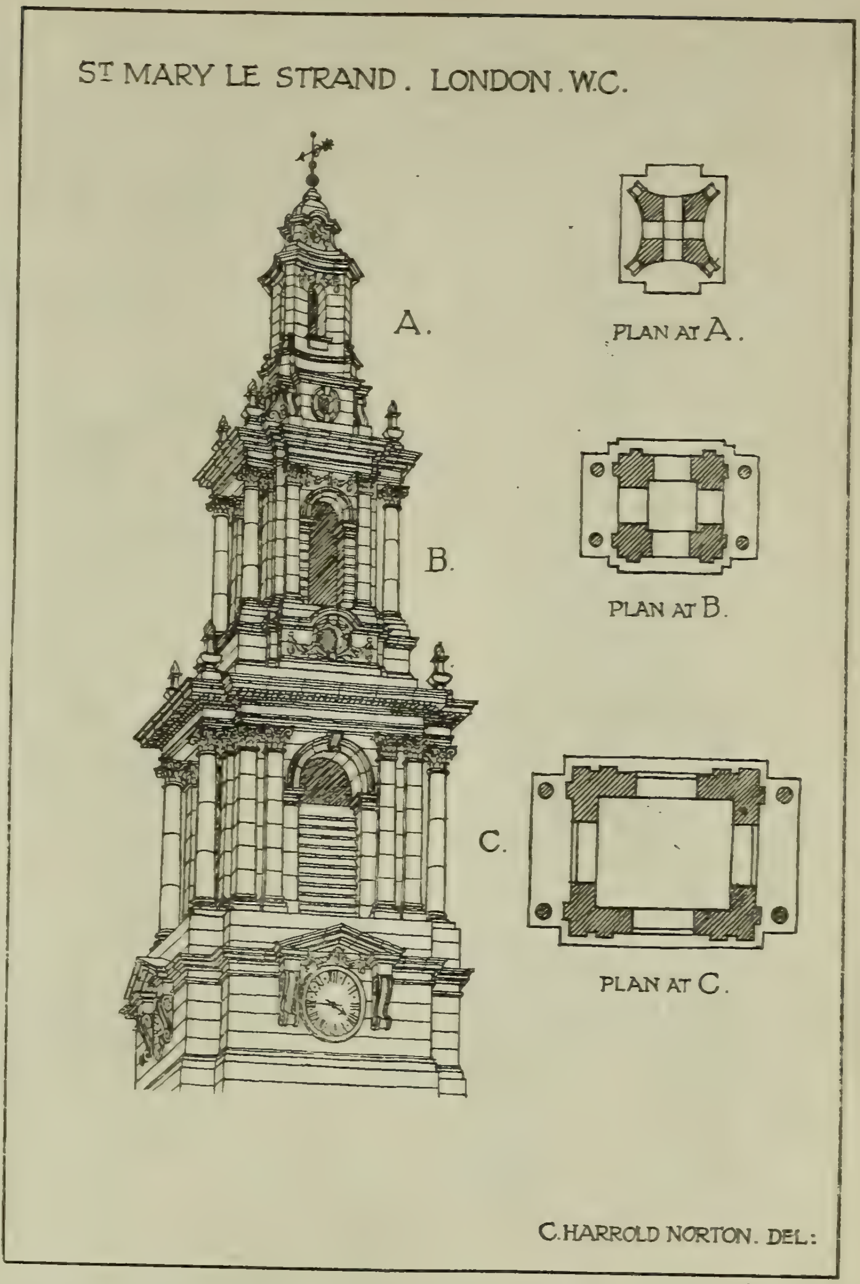
(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

HE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

. XXXVI.—St. Mary-le-Strand and St. Martin-in-the-Fields.

JAMES GIBB was the architect of three urches in London—St. Mary-le-Strand, Martin-in-the-Fields, and Marylebone apel—and also of the church of All Hallows Derby. St. Mary-le-Strand was erected the reign of Anne, being designed by Gibb er a tour in Italy, and the Commissioners building fifty additional churches (of which forms one) "spar'd no cost to beautify it." is externally a two-storied building, the er story unwindowed, "to keep out the ses from the street," the upper being pierced windows of which alternate lights are mounted by pediments suggesting a *tif* sometimes employed by Michelangelo. iginally there was to have been a small l turret, and at a distance of 80 ft. from west front a column 250 ft. high, surmounted a statue of the Queen, but on her death erection was abandoned. As the building s 20 ft. above the ground, and the abandonnt of the column suggested the necessity a steeple, the feature was added, but, in nsequence of the position of the walls, had be oblong in form, a difficulty which has en very skilfully surmounted by the architect. ob made other plans for the church which re abandoned, because they exceeded the site owed by Act of Parliament. The interior refined, but slightly wanting in interest; shallow elliptical ceiling is carried out in aly-decorated plaster ribs.

The old church of St. Martin-in-the-Fields ng in danger of falling, the parishioners ained an Act of Parliament for rebuilding at their own charge, and the Commissioners pointed Gibb surveyor. He made several igns for the new church, including the very eresting circular ones which are illustrated his book, but were abandoned for reasons cost. The first stone of St. Martin's Church s laid in the year 1721, and it was completed years later at a cost of £32,000. The ing is elliptical, a form preferred by the hitect "to be better for the voice than the nicircular, though not so beautiful." The ster-work of the ceilings was the work the Italians Arteri and Bagueri, who are cribed as "the best fret-workers who ever ne to England." In these two churches the erence between the work of Wren and his cessors is marked. The plans are far more urately symmetrical, but the work of Gibb, ough of much merit, is wanting in the rm and interest which distinguish the k of his great predecessor, while less mastery the combination of form and outline is wn.



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THE URVEYORS' INSTITUTION.

HE forty-eighth annual general meeting the Surveyors' Institution was held on 29 at No. 12, Great George-street, Westster, S.W., Mr. John Henry Hanson in the r.

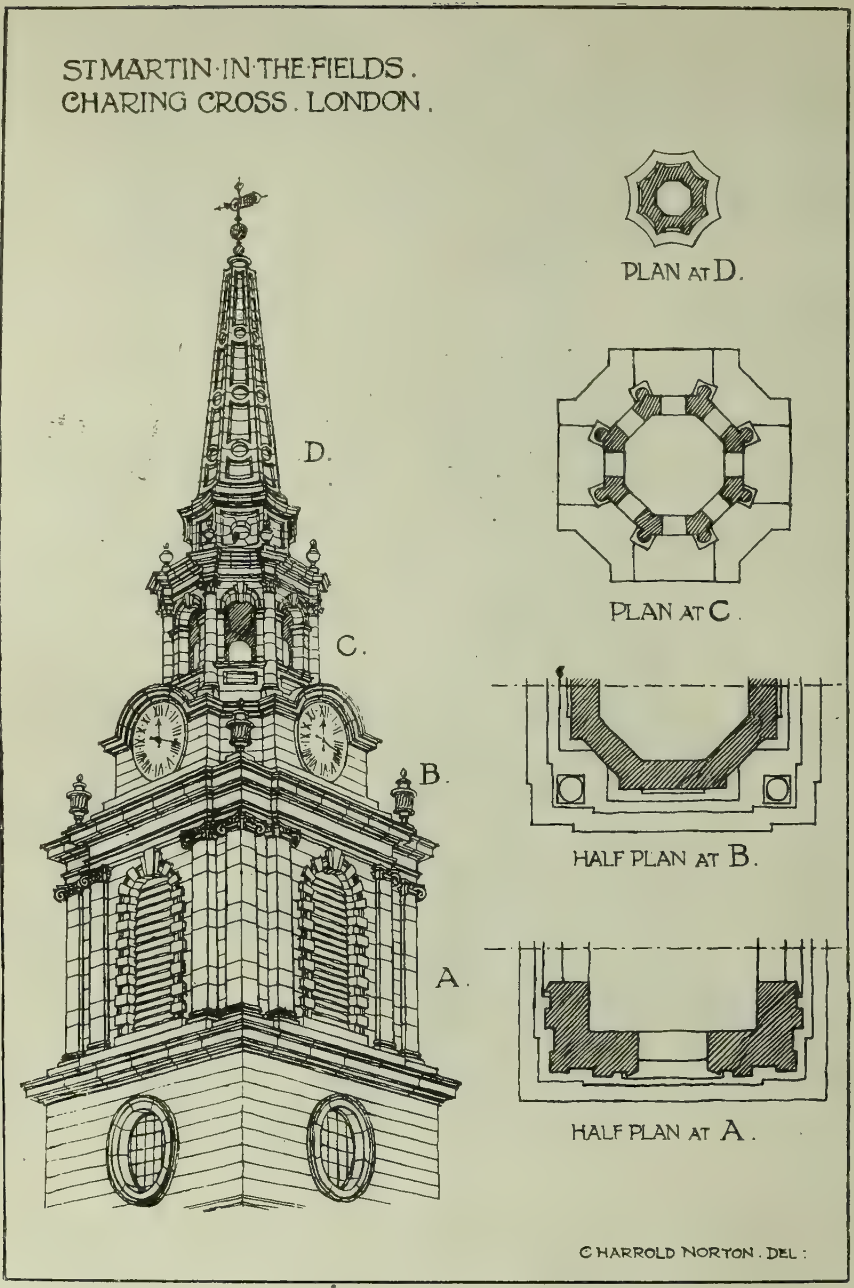
he Report of the Council and the balancet were received and adopted. From the ort we take the following:—

The statistics of membership again show a iderable fall in every class except that of nial Fellows, but of that fall more than half tributable to a decrease of 119 in the number udents, the supply of whom is practically off by the calls of military service. The might be said of Professional Associates, number sixty-nine less than twelve months Although a considerable number of men passed the Intermediate Examination, war has prevented so many of them from ng for the Final that the source from which balloting list is mainly recruited in normal s has therefore now practically been d. In this connection it is interesting to that the balloting list of October, 1913, ained the names of thirty candidates for the Fellowship and Colonial Fellowship, one for the Associateship, and 452 for the Professional Associateship, while the numbers in October, 1915, were respectively thirty, none, and fifty-five. The class of Probationers, recently formed from among those who, having passed the Intermediate Examination, wish to connect themselves with the Institution until they have passed the Final and come up for election, show a slight increase of from forty-nine a year ago to sixty-two at the present time.

As was inevitable in the circumstances, the Statement of Account shows that considerable changes have taken place during the year, but the Council feel that members are to be congratulated upon the manner in which the Institution finances have stood the strain of the war. In spite of the great depletion of income due to the fact that members on naval or military service are not asked to continue their subscriptions during their absence from professional life, it has been found possible again to carry on the year's work without making any call upon capital, the decrease in revenue being met to a great extent by economy in expenditure. The decline in the receipts from annual subscriptions amounted to £1,610 and from entrance fees to £140. It has been, however, in connection with the Examinations that the most marked loss has been manifested. During the few years prior to the war the large number of candidates presenting themselves for examination led to balances in examination fees over expenditure becoming available for the increase of the Scholarship Endowment Fund. These dropped to £95 in 1914, the first year of the war, while for 1915 the Examination Account showed a deficit of £600, in spite of a reduction by a similar sum of the expenditure under this head.

By suspending the offer of new scholarships during the period of the war, by the discontinuance for the time being of the country meeting and the annual dinner and reception, together with the consequent reduction in the cost of printing and postage, and by other retrenchments, distributed under almost every heading, a total decrease of expenditure compared with 1914 amounting to about £2,200 has been effected. In these circumstances the Council have been able to respond to the national call by taking up £1,000 of the Second War Loan.

The calls of the war were very evident in the number of candidates who presented themselves for the Preliminary and Professional Examinations during the current year. There were forty-four candidates only for the Preliminary Examination, the smallest number since 1883, the third year in which the examination was held; while we have to look back to 1892 to find a lower total than 139, the number who this year sat for the Professional Examinations.



Wren's Churches. (*See page* 397.)

By the death of Mr. A. W. Mellersh the Institution benefited by a legacy of £100, the proceeds of which were to be devoted to a prize for the encouragement of forestry. The Daniel Watney Prizes being already available for this purpose in connection with the Special Diploma Examination, the Council decided to allot this prize to the candidate doing best in the Outdoor Forestry Examination, Final Division.

The Council have decided to suspend during the period of the war the offer of Institution scholarships tenable at the Universities. They have been influenced in arriving at this decision by the fact that the call to military service not only had the effect of reducing the number of candidates desirous of competing, but, what was perhaps more important, in the absence on service of the best, of lowering the average standard of those who applied. This was perhaps to be expected, but in the circumstances the Council considered that the objects for which the scholarships were established would not be attained during the present interruption of university studies.

During the period of the war the *Professional Notes* will be issued every four months instead of quarterly. The Notes and Queries will continue to be dealt with expeditiously in the usual manner, and the Council feel, therefore, that this war economy may be adopted with no serious inconvenience to members. Expenditure on the Library and Forestry Museum has been reduced to a minimum. The former, however, is kept up to date by the purchase of new works of special interest to the profession, and new editions of previous issues as they are published.

The Council have little of special interest to announce with regard to the work of the majority of the committees. The Parliamentary Bills and General Purposes Committee, however, have had a considerable amount of work thrown upon them in connection with the war, such as the Increase of Rent and Mortgage Interest (War Restrictions) Bill, the proposals in connection with which they considered in their earliest stages, reporting thereon through the Council to the President of the Local Government Board. While that measure has been subjected to a considerable amount of criticism as economically unsound, it should not be overlooked that it was passed to meet certain abnormal conditions which had arisen; and that Mr. Long, in introducing the Bill, specially disclaimed any suggestion that the proposals were logical or that they could be defended on economic grounds. They have also been engaged in considering the appointment of arbitrators under the Housing Acts; the effect of Lord Derby's recruiting scheme and the Military Service Acts on the profession; the
manner in which the depletion of office s
could best be made good; and the effect of
excess profits duty on surveyors' earnings.

Twelve months ago the number of t
connected with the Institution who had jo
his Majesty's forces was 1,063, of whom twe
nine had given their lives in their count
cause. Those figures must now be incre
to 1,757 and sixty respectively. Of the fo
figure 197 are Fellows, 1,002 Professi
Associates, seven Associates, ten Col
Fellows, and 481 probationers, students,
examination candidates. Eight member
the Institution staff are also serving.

A circular was issued warning members
the War Risks Insurance Committee exa
very closely claims for compensation in res
of damage to property by hostile aircraft u
the Government scheme, and do not ac
liability for professional fees in respect
reinstatement, or for the cost of rene
boundary walls, paving, etc., unless spec
mentioned in the policy. In the circumsta
members were advised to see that the na
of the property and the risks which it
desired to cover were precisely defined;
it was pointed out that where the insura
were effected by reference to existing fire pol
this might be done by endorsement thereo

In view of the possibility of unemployn
arising at the termination of the war, and
necessity of taking steps beforehand to m
it, the Council have set up a committee divi
into two parts, representing respectively t
and country conditions, with the follov
reference:—

To consider the problems likely to aris
the termination of the war, more particul
in connection with possible unemploym
on the disbandment of the Army and muni
workers; and dealing with the quest
involved in the light of the special knowle
possessed by surveyors as distinct from o
professional men or from representatives
trade and industry, to suggest preventive
curative schemes. These committees are
sitting, and it is hoped that valuable res
may be obtained from their deliberations.

Among other subjects dealt with during
year have been town planning, in connec
with which a circular was sent out jointly
the Institution of Municipal and Cou
Engineers, urging surveyors representing l
authorities and those in private practice
co-operate in order to secure agreement in
earliest stages of the preparation of to
planning schemes; and in connection
which, also, the Council have joined with
Royal Institute of British Architects to imp
upon the Government and other authori
the urgent need which exists for defi
without delay the lines of main arterial road

The Council also have had under conside
tion the appointment of arbitrators under
Housing Acts, and have laid before the Lo
Government Board the advantages, from
point of view of economy, promptitude,
certitude of judgment, of employing
arbitrators men with a professional knowle
of the matters with which they have to dea

Mr. Howard Martin was nominated
represent the Institution on the Tribu
of Appeal under sect. 28 of the London Build
Act, 1890, in place of the late Mr. Herb
Thomas Steward."

Votes of thanks were passed to the vari
officers of the Institution for their services,
a vote of thanks was passed to the retir
President (Mr. John Henry Hanson).

Mr. George Francis Stewart was elec
President for the ensuing year. The V
Presidents for the year were elected as follows
Messrs. Arthur Lyon Ryde, John Hub
Oakley, Andrew Young, and John Willmot

Ordinary Members of Council.—Sir Rob
James Thompson, Messrs. Joseph Henry Sal
John McClare Clark, James Inglis Davids
Edwin Savill, Edmund Walter Rushwo
John David Wallis, Dendy Watney, Geo
Corderoy, Ernest A. Rawlence, Herbert Ma
field Cobb, Edward Samuel Cox, Bern
Marr Johnson, Ernest Holtham Leeder, He
Hartley, and Chas. Herbert Bedells.

As Professional Associates of Counci
Messrs. Stanley Hicks and John Maughan.

As Associates of Council.—Sir John W
Barry, K.C.B., and Mr. G. Mallows Freeman, K

CORRESPONDENCE.

The Commercial Value of Design.

Sir,—The excellent leading article in your ıe of May 19 raises questions which have zzled the plain man since first he began to nder whether it is really in the nature of ngs that the fittings of his middle-class ıse must be ugly and vulgar. Producers all the things of common use have sinned, l none more stupidly than the builders' rchant; there is no lack of examples, but, ong those you mention, door furniture is ical of most. The few well-designed fittings this kind which are now to be bought have y been produced at the urgent demand of hitects, and very rarely at a price that mits of their use in cheap houses. The rdry embossed finger-plate with a "New " iris crawling over it, or with a feeble vesty of Adam detail, is sold by hundreds thousands, and so the manufacturer clings he belief that it is "what the public wants," getting that the public is wholly inarticulate l must needs suffer what he chooses to give sullen silence, having no remedy. Where ice enters into the matter it is simply a ice of the least among a perplexing array vils.

n other countries, where manufacturers less timid than in England, or, it may be, securely lulled by inherited prosperity, minent architects and designers have been ed in to help, with a success which has been great from the financial standpoint as from t of the improvement in general taste. It rue that the hack-designer at 30s. a week is aper than the expert who commands a sonable fee for his knowledge; but where article is produced by the hundred—often thousand—gross the initial cost of a good ign is negligible. Moreover, a designer really understands his job will generally e this cost over and over again because he design not merely "on paper" but with ue regard for economy of material and of cess.

n any case, it is safe to prophesy that the t manufacturer who has the courage to operate whole-heartedly with the trained st, whether in the matter of door-handles, -stoves, or any of the hundred-and-one ngs that go to the fitting-up of the modern se, will reap a reward which will surprise ody so much as himself.

leanwhile, our art students remain art dents in the worst sense of the word, for of contact with the realities of commercial duction, while the man of taste who cannot rd to have things made specially for him ds more and more to look abroad for such will offend neither his eye nor his purse.

Hamilton T. Smith,
Hon. Secretary,
Design and Industries Association.

Sir,—In your leading article of May 19 very truly observe "we have never underod that good design has a commercial ue which it is wise to recognise and that d art represents good business."

t is well that this point should be put ward and pressed home, even if it is rather niliating to have to confess that seemingly only effective way of endeavouring to attain far-reaching improvement in the general ndard of design is to appeal to the pockets he producers and the users.

Fitness for purpose does not seem to have herto had much effect, otherwise we should see everywhere so many unsuitable build- s fitted up throughout with quite as unsuit- e accessories. Such buildings and such ings as are well and suitably designed—and y are not few—are, after all, but drops in the ket and do not affect the situation taken as hole.

Although the fact that a building is really an and artistically attractive one does not, you remark, run up its price to the relatively rbitant figures that are given for old books, tures, etc.; still the craze for antiquity in shape or form is so strong that people l not only pay a relatively higher price a building because it is old, but will, in numerous instances, put up with inconveniences, many and constant, on this account rather than build structures suited to their needs and in which they would be really much more suitably and comfortably housed, and which they would be able to run more conveniently and economically in every way. In nine cases out of ten it is not that the artistic qualities are really appreciated, but that it is one of the fashions of the time. Witness the way in which old buildings, once they are acquired, are often sadly mauled about by the purchaser and the local builder and all or nearly all genuine interest obliterated, although they still remain in the eyes of their fond possessors "old buildings." The same remark applies to old fittings, such as panellings, fireplaces, etc. How often does one find interesting pieces of genuine old craftsman's work used in an entirely unsuitable way and placed in uncongenial surroundings!

Architects have done much to remedy this state of things where their advice has been asked and taken; but again such cases are comparatively few when one takes into account the total number. The fact is that we have to deal with a public, taken as a whole, which is entirely uneducated in artistic matters and follows a fashion blindly in these as in many other ways; and to educate the public we must begin by educating ourselves. How often do architects put into a secondary place the practical considerations of their problem, be it a large city building, a church, or a country house!

We are still tied by the shackles of the past, and "style" in the wrong sense has still far too much influence over us. We must learn to be much more honest and straightforward and direct. True, we have no tradition with us to-day and must get our inspiration from somewhere, but let it be our problem of the moment that inspires us and let the proper use of our materials influence the form of our design, and, if we do so, we should be able to get dignified buildings without having recourse to such subterfuges as, for example, applied "Orders" and overhanging entablatures, which often shut out valuable light and air.

All our fittings should be efficient and direct without affectation or unnecessary ornamentation. For instance, amongst other things, a firegrate should be schemed to give the maximum of heat with the minimum consumption of fuel and the minimum of attention and cleaning. Door and window fastenings should be easy to handle, efficient in action and not liable to get easily out of order. In electric light we have a medium of illumination which can be distributed with the greatest ease, and yet we find the tendency has been towards mass-grouping of lights and consequently wastefulness of power. Much has still to be done in the way of fittings that, while giving a sufficiency of light with the smallest amount of power, do not disturb the eye. The recent direction in the way of improvements has been to increase the lighting capacity of each lamp while reducing the consumption. What seems to be equally important is that we should have a lamp of moderate lighting capacity using a minimum of power. This would be a real commercial asset, for private lighting especially.

In the matter of small housing, the so-called "Garden City" movement, where wisely applied, is tending towards a simpler and more straightforward type of building, and the weekly wage-earning class seems to appreciate what has been done, especially where equivalent value for value is given. Witness the success of the co-partnership housing movement.

It ought not, as you say, to be the business of an architect to have to design all the small accessories of his building, and indeed he has seldom got the technical qualifications which would enable him to do so satisfactorily. Here, again, co-operation between craftsman and architect should make good and suitable accessories possible. Good results have indeed been produced under such co-operation in exceptional circumstances, but at a needless expenditure of time and energy. But these should not be the exception, and large manufacturers ought to be able to produce, under right influence, suitable accessories in good taste which would not look out of place in any straightforward modern building.

Nothing, however, of any permanent value can be accomplished without education all round in suitability for purpose: the architect in his design and materials, the builder and the craftsman in their respective mediums, the producers and the distributors in all the accessories which go to make a complete building, and the public, not least, in its appreciation of what is right and appropriate.

Robert W. S. Weir.

BOOKS.

The Chancel of English Churches. By Francis Bond, M.A. (Oxford University Press. 7s. 6d.)

Mr. Bond's books form a useful halfway house between books which appeal to the antiquarian and ecclesiologist and those which are primarily and more solely intended for the architect. He brings to his task great knowledge and the industry which alone can inspire the necessary research, without which such works are valueless, both as records and as works of reference. It is natural, as everyone has the defects of his qualities, that Mr. Bond should illustrate examples which would have been omitted in a purely architectural work, and that the defect that we have noticed in other of his books, the inclusion of many illustrations which are somewhat indifferent in quality, should be apparent here. The book contains 229 illustrations, chiefly half-tones, many of which are reproductions from very poor original photographs, whereas about half that number of really first-class illustrations would have been of greater value; but the temptation to a man of great erudition to illustrate all his points and to give readers the benefit of his research tends to overcome sound judgment and to detract from the value of the book as a work of art. The book is divided into ten chapters, which deal in detail with the altar, the reredos, the Lenten veil, the communion-table, the altar rails, the piscina and credence, the sedilia, the chantry, the sacrament house, the Easter sepulchre, and the squint, besides other matter contained in an appendix. The value of the book to an architect, and especially one whose work lies in an ecclesiastical direction, is largely as a reference volume from which he may extract authorities and precedents which are so necessary when dealing with questions affecting ritual in the design of a church; its value for the clergy rests on a similar basis. It will form a welcome addition to the library of the ecclesiologist, but it cannot be expected to be a work which will be useful to the student of design or for those whose interest lies in the broader fields of architectural thought. In a word, the author has added another volume to the great series of works of reference which he has already produced, works for which he has acquired a well-deserved reputation.

Practical Drawing. By E. G. Lutz. (London: B. T. Batsford. 6s. net.)

In considering this book we take it for granted that it is intended primarily as an aid to those using draughtsmanship for commercial purposes rather than the serious art student. As such it is an admirable little book, containing as it does a mass of information, suggestions, and clever ideas. The matter is clearly set out and well-illustrated with diagrams and sketches. The ground covered ranges from the earliest stages in beginning to draw to the human figure, and the various mediums—charcoal, water-colour, and pen and ink—are dealt with separately. Further chapters give most of the information required for this type of work in geometry, perspective, and composition, whilst drapery and costume designing are considered in a concise and useful manner. Here we should say that we cannot agree with the author that "sketching anyone clothed with fresh examples of the sartorial art requires just the knack, one might say, of drawing drapery well." On the contrary, no drawing of a figure, draped or clothed, can, we hold, give a satisfactory result unless it has been guided by a sure knowledge of the nude. But this is only a minor matter, and does not detract from the value of the book. A section is devoted to lettering, and a comprehensive chapter on materials brings this store of useful and practical information to a close.

GENERAL NEWS.

Future of Charing Cross.

On Wednesday last week Lord Bristol's Select Committee of the House of Lords passed the South-Eastern and Chatham Railway Company's Bill for the strengthening of the existing Charing Cross bridge. Evidence against the proposals had previously been heard. Sir Lionel Earle, Secretary to the Office of Works, said he thought the new proposals would make the bridge uglier, and he advocated delay. After the war there would be an enormous increase in traffic on that railway, with the probability in the near future of a Channel tunnel, and he thought they ought to take the wide view. He had always understood that the sale of the Charing Cross site would practically pay for a fine new station south of the river. That would leave the way open for a magnificent national war memorial—a really beautiful bridge for ordinary traffic across the river on the site of the existing bridge.

Architects and Military Service.

. The arrangements made by the Royal Institute of British Architects and the Queen's Westminster Rifles for the enlistment of members desiring to serve together have unfortunately had to be cancelled as the War Office has found it necessary to stop further recruiting for this regiment. Fresh arrangements have now been made with two other battalions in which members of the Royal Institute and other architects will be welcomed if they will come forward without loss of time. Anyone desirous of taking advantage of these arrangements should apply at once to Lieutenant and Quartermaster H. G. James, the 22nd Battalion (R.), King's Royal Rifles, Norfolk House, Laurence Pountney-hill, E.C.; or to Captain Briggs, 23rd County of London Battalion (T.), 27, St. John's-hill, Clapham Junction. Unattested men can enlist at once in either of these battalions, provided they are fit for general service and are up to the prescribed standards. Attested men should apply either to Captain Briggs or to Lieutenant James for a letter which will enable them to complete their attestation at their local recruiting centre, and to be transferred to the battalion which they wish to join.

The Institution of Municipal and County Engineers' Examinations.

We have received a copy of the revised Regulations and Syllabus for the examinations held by this Institution. The Testamur Examination of the Institution has been held since 1886, and, although the booklet has been brought up to date from time to time, it was felt that a complete revision would be of service. The alterations may be summarised as follows:—Candidates will now be admitted to the examination at the age of twenty-one instead of twenty-two; candidates will be required to have spent at least a year in the office of an engineer engaged in public work; by the elimination of a certain amount of overlapping and rearrangement it has been possible to reduce the number of papers by one, which, together with the addition of an extra day to the examination, has given an opportunity of instituting a practical examination. The practical examination will be supplementary to and not in substitution for the *viva voce* examination. It is hoped that examination of candidates on the actual site on which work is taking place will result in establishing a still higher standard of practicability and knowledge than has hitherto been obtained. In the booklet will be found particulars of the examination for the Certificate in Town Planning and in County and Highway Engineering. The former was recently established for the purpose of giving an opportunity for a qualification to be obtained in the principles and practice of town planning. The first examination was held in October, 1914, and the arrangements have proved very successful. The certificate in County and Highway Engineering is intended for those engineers who propose to devote themselves especially to the work indicated by the title, and special attention is given to roads, bridgework, etc.

"Harper's Magazine."

Harper's for May contains an interesting illustrated article entitled "Through the Juras by Motor," by Mr. Albert Bigelow Paine.

The Royal Sanitary Institute.

The Royal Sanitary Institute will hold a conference on Sanitary Administration under War Conditions on Friday and Saturday, June 9 and 10, at the Institute in Buckingham Palace-road.

Reconstruction of Dublin.

The Council of the Institution of Civil Engineers of Ireland, at a special meeting held on May 24, had under consideration the suggestions put forward by the Lord Mayor at a conference held at the Mansion House on May 16, that Parliamentary powers should be obtained to facilitate a scheme of restoration of Dublin. The following resolutions were passed:—(1) The Council approve of the proposal that Parliamentary powers be obtained; (2) that the Institution of Civil Engineers of Ireland should be represented upon any Committee or other body appointed to consider or deal with the same; (3) that in constituting the tribunals to deal with the property owners the services of Irish professional men having local knowledge should be availed of as far as possible.

Appliances for Extinguishing Fires Caused by Bombs.

A Committee was appointed a short time ago by the Secretary of State for the Home Department to conduct experiments to test the value of dry powder fire extinguishers as compared with water and other "first-aid" fire appliances, for extinguishing or effectively controlling fires, such as are likely to be caused by bombs. In their Report the Committee state that the conclusion to be derived from the experiments is that, while none of the agents employed could be said to have any material effect on the combustion of the bomb itself, there was a very marked general difference between those experiments in which water was used and those in which dry powder was applied. The spread of the fire caused by the bomb was greatly limited, and in some cases totally prevented by the application of water; whereas after the application of the dry powder the fire continued to burn, although at each application some temporary check to the fire was noted. The Committee are confident that by far the best extinguishing agent is a plentiful supply of water applied in the manner most convenient, and that the use of dry powder extinguishers is to be deprecated as not only giving a misleading sense of security, but being practically useless for extinguishing or effectively controlling fires likely to be caused by bombs.

Examination in the Principles of Teaching and School Management.

The Board of Education give notice that they will hold at approved centres on July 20 next at 10.30 a.m. to 1.30 p.m. an examination in the Principles of Teaching and School Management under the rules as to the issue of teaching certificates for teachers of art (Rules 109). The examination will be based upon the syllabus published in Appendix C to Rules 109, and will be open to persons who have satisfied the requirements of those rules. As regards paragraph 4 (*a*) of those rules, unless exempted under paragraph 4 (*b*), they must have already completed or will be completing on or before July 31, 1916, an approved course of training in the Principles and Practice of Teaching at an institution recognised by the Board for the purpose. A fee of 3s. 6d. will be charged to each candidate for this examination and must accompany the form of application. Applications to attend the examination must be sent through the Managers of the Institution on the prescribed form (792 T.) so as to reach the Secretary, Board of Education, Whitehall, London, S.W., not later than June 14 in the case of a candidate who may not have already furnished a medical certificate indicating his fitness for the work of a teacher, and not later than June 21 in the case of a candidate who has already furnished a satisfactory medical certificate.

"Municipal Engineering."

We are informed that the title of the *Sani*
Record and Municipal Engineering has b
changed to *Municipal Engineering and*
Sanitary Record.

Auction Sale of Wharf, etc.

On Tuesday last, at the Mart, Messrs. Da
Smith, Oakley, & Garrard, of 4-5, Cha
street, St. James's-square, S.W., held,
order of the High Court, an auction sale
freehold wharf and factory premises in Rot
hithe-street, S.E. The property was divi
into two lots, but first offered as a wh
The offers quickly reached £5,750, at w
sum the bidding paper was eventually signe

Memorials to Archdeacon Wilberforce.

A meeting was held on Tuesday at St. Jo
Institute, Tufton-street, S.W., to dis
proposals for a memorial to Archdea
Wilberforce. It was agreed that memo
tablets should be placed in St. John's, W
minster, and St. Mary's, Southampton.
was also resolved that if a fund for a nati
memorial was raised representations sh
be made in favour of about £2,000 being dev
to the endowment of St. John's Institute, w
would be renamed "The Basil Wilberf
Memorial Institute."

Proposed Memorial to Mr. Willett.

The following is taken from a letter
Mr. Chas. J. Wade to the *Daily Telegrap*
reference to a suggestion that some no
should be taken of the persistent working
and now successful completion of, the Dayl
Saving scheme that the late Mr. W. Wi
followed so consistently for so many year

"Mr. Willett was a builder, I think w
might be termed a successful specula
builder, for he erected houses that, in co
quence of the high-class material from w
they were constructed, have passed into f
as 'Willett-built houses.' What could
more appropriate than that the President or
of the Past-Presidents of the Master Buil
Association should father the request fo
general acknowledgment of what is beli
will be a great boon to all classes of soci
I shall be pleased to be of any assistanc
called upon, and should cheerfully give
some of my time to help in establishin
memorial, which might take the form of s
charitable object in connection with the t
of which he was so straightforward and ho
a member during his life."

We have no doubt the proposal will be
sympathetically considered by the Ma
Builders' Association.

Rebuilding Dublin.

Archbishop Walsh, in the course of a le
to the Dublin *Daily Express*, says:—"I h
read with special interest, in more than
of our Dublin newspapers, references to
town-planning project, of which, as app
to Dublin, we heard a good deal a few y
ago. The plan recently before the public
that of Professor Geddes. One of its m
features was the opening of a great thorough
—a 'Via Sacra'—which was to run past
Patrick's and Christ Church Cathedrals,
on, I think, to the Broadstone. It was a
events to pass between the Four Courts
the Ormond Market district, thus opening
way for the construction of a new cathe
in the district then but recently cleared by
Corporation for the erection of artisans' d
lings. Notwithstanding, however, the good
of the Corporation, there were obstacles
the way, and the scheme had to be abando
It has now been suggested to me, not only
members of my own flock, but also, and
specially encouraging way, by Protesta
that the present lamentable condition of
city may afford an opportunity of mak
available a really suitable site for a cathe
in one of the devastated districts. . .
do not at all contemplate the actual building
cathedral in Dublin in a time of stress such
the present. If a suitable site could be secu
my idea would be to have it laid out a
public garden and put in trust, thus secu
it for the purpose of public recreation somew
as St. Stephen's Green is at present, until
work of building could be taken in hand."

RCHITECTURAL SOCIETIES.

rchitectural Association of Ireland : Rebuilding of Sackville-Street.

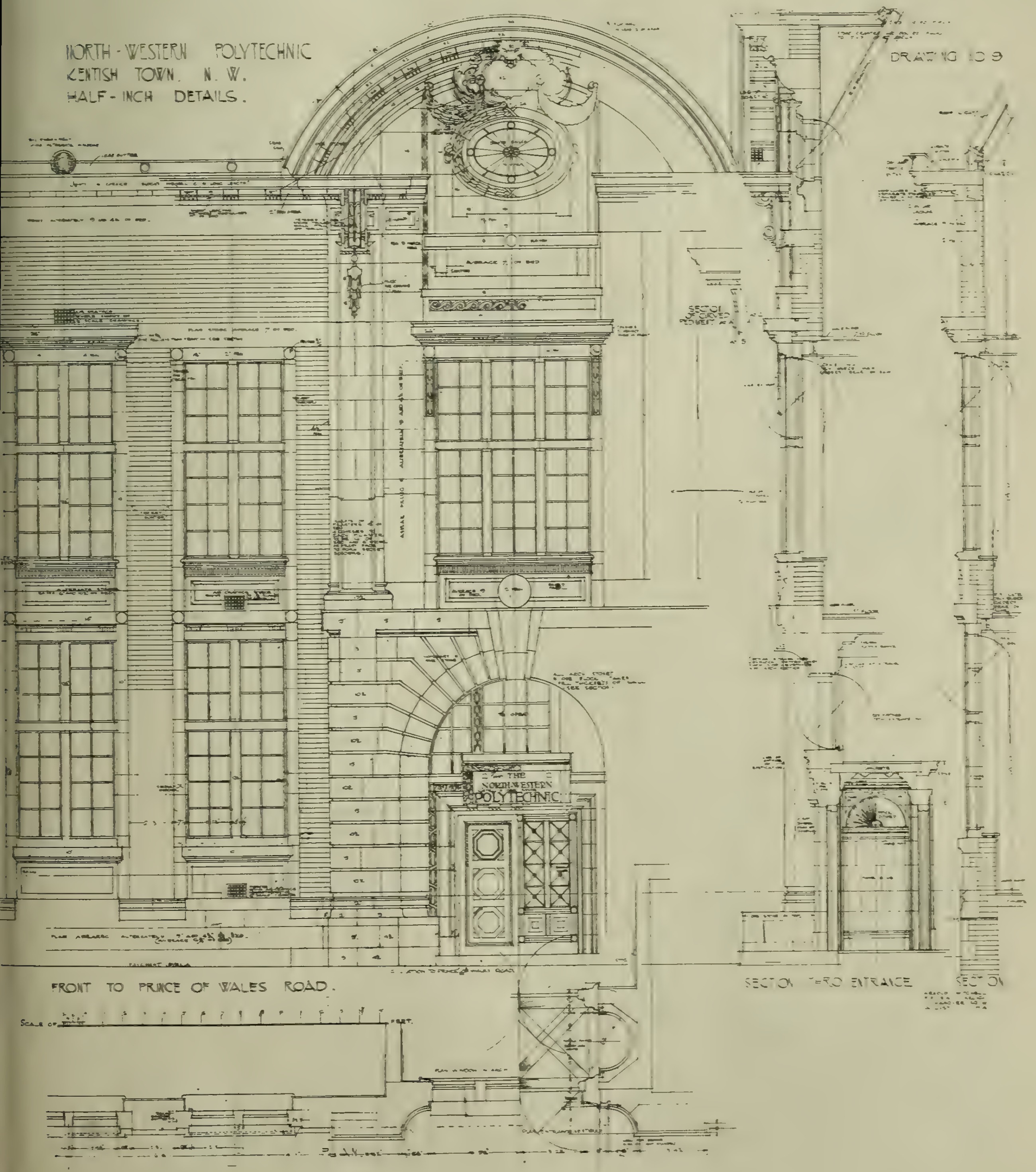
H. G. Leask, President, occupied the at the final meeting of the session 1915-16 e Architectural Association of Ireland, at the rooms, South Frederick-lane, n.

e annual Report mentioned that, despite difficulties, the work of the Association been carried on successfully during the n. The total number of members was 115, an increase of five over last session. ommittee had adopted a resolution to the that all members serving in his Majesty's should be exempt from payment of riptions for the current session; and, in view of the prevailing conditions consequent upon the war, it was decided that the officers and Committee should retain office during the coming session. It was also mentioned in the Report that twenty-one members were now on active service.

On the motion of Mr. Edwin Bradbury, seconded by Mr. Allberry, the Report was unanimously adopted.

The President, referring to the problem of rebuilding Sackville-street, said the deplorable destruction of property in that area had produced a unique opportunity for the construction on lines worthy of the dimensions of the street of stately and harmoniously designed buildings in place of the previously existing miscellaneous and characterless frontages. That this opportunity should be due to catastrophe was greatly to be regretted; but, architecturally speaking, the old frontages were no loss to the amenities of the city, and it was to be hoped that the schemes already in train for the harmonious treatment of the street would come to full fruition. It was not necessary to say that Dublin architects—proud of the older glories of the city in the Georgian period—were ready and keen to assist the authorities towards these desirable results. The President also announced in connection with the work of the Association that what they should be most proud of was the fact that 20 per cent. of the members of the Association were serving with the military forces of the Empire.

The following prizes were awarded:—Class design, Mr. Stephen S. Kelly; Institute prize, Mr. W. S. Keatinge; Vice-President's prize, Mr. Stephen S. Kelly; Downes' bronze medal and prize of 2 guineas, Mr. W. A. Dixon.



Mr. Arnold Mitchell, F.R.I.B.A., Architect. (*See page 402.*)

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ILLUSTRATIONS.

North-Western Polytechnic.

THE whole of our inset illustrations this week are devoted to the accepted design by Mr. Arnold Mitchell, F.R.I.B.A., for the North-Western Polytechnic, Kentish Town, N.W., and in a subsequent issue we shall give further details of this interesting and important building.

MEETINGS.

MONDAY, JUNE 5.

Royal Institute of British Architects.—Business meeting. Election of members; election of Council and Standing Committees. 3 p.m.

Incorporated Clerks of Works' Association (at Carpenters' Hall, London-wall).—6.45 p.m.

WEDNESDAY, JUNE 7.

Royal Archæological Institute (in the Apartments of the Society of Antiquaries, Burlington House, Piccadilly, W.).—Sir William Martin Conway, M.A., F.S.A., on "Goldsmiths' Work in the Dark Ages." With lantern illustrations. 4.30 p.m.

◆

BOOKS RECEIVED.

SEWERAGE. By A. Prescott Folwell. (London: Chapman & Hall, Ltd. 12s. 6d. net; New York: Jno. Wiley & Sons.)

A HISTORY OF ARCHITECTURE. Vols. III. and IV. By Russell Sturgis, M.A., Ph.D. (London: B. T. Batsford, Ltd. 25s. net each volume.)

ENGLISH MURAL MONUMENTS AND TOMBSTONES. By Herbert Batsford and Walter H. Godfrey, F.S.A. (London: B. T. Batsford, Ltd. 12s. 6d. net.)

THE SHIP-PAINTER'S HANDBOOK. By Geo. S. Welch. (London: John Hogg. 3s. 6d. net.)

FIFTY YEARS AGO.

European Perplexity.

THE Kaizer, Prussiana, and the Czar
  Would hold their Polish prize;
The Pope would keep the Roman hill
  A den of rogues and spies.

Emmanuel claims Venetia fair,
  And swears—"'tis only mine":
The German scarce knows what he wa
  But fears to lose the Rhine.

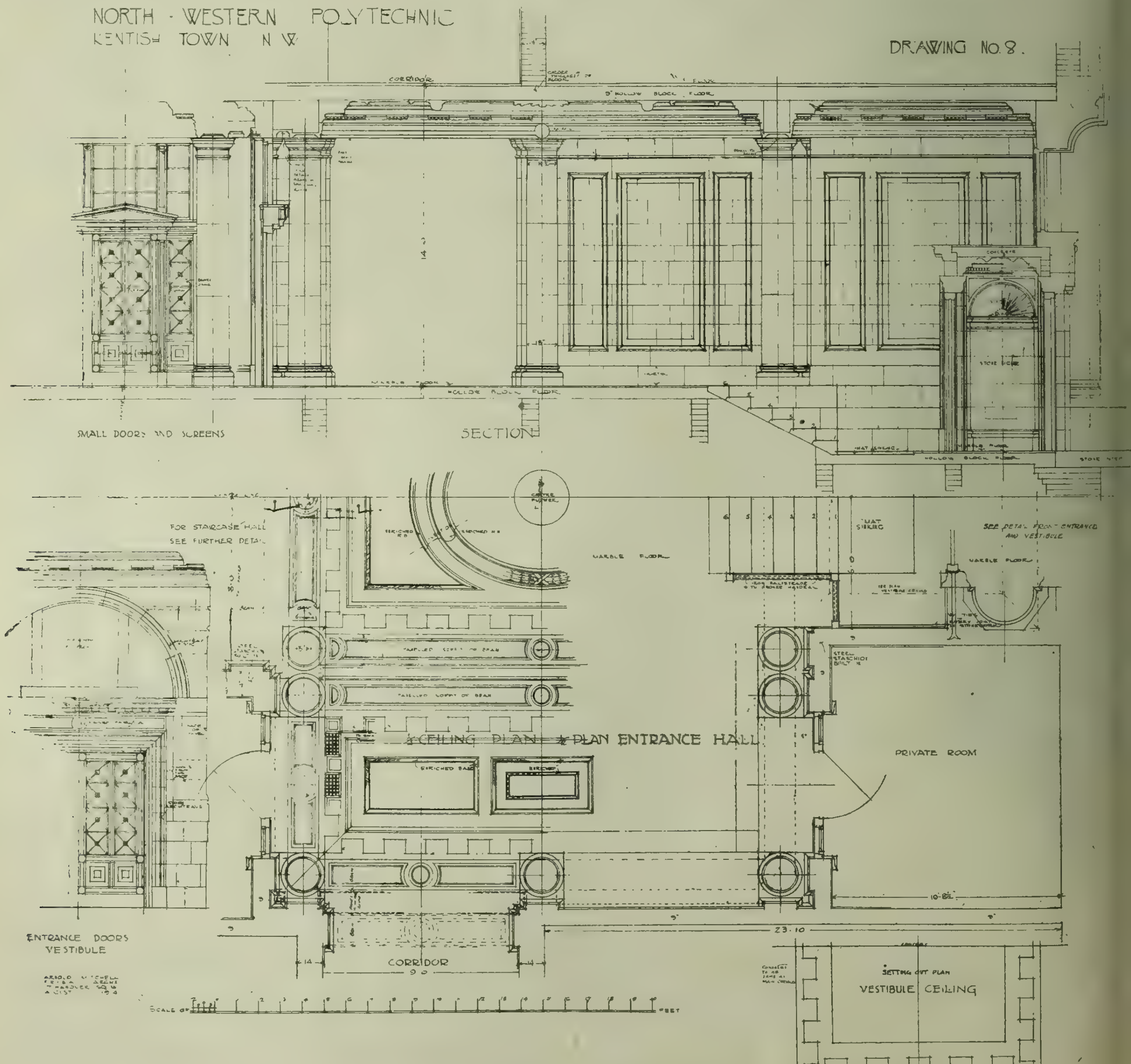
The Turk looks on and smokes his pi
  Like one that loves his ease;
And waits till Allah shall arise
  To drench a swarm of bees.

Napoleon's righteous soul is vex'd,
  Like Lot's on Sodom's plains;
But if he reap what others sow,
  It will reward his pains.

John Bull has sown his turnip-fields,
  And these he hopes to reap;
Who comes to pull them, wanting leav
  Had better been asleep.

J. RITCHI

[*** From the *Builder* of June 2, 186
ED.]



Mr. Arnold Mitchell, F.R.I.B.A. Architect.

LEGAL SECTION.

TES ON CURRENT CASES.

Liability of Building Owners.

N the distraction of war-time the fact that the decision in the case of Crittall Manufacturing Company *v.* the London nty Council (reported in our Reports in l. at page 692), and which caused some ation at the time it was delivered, has been pproved by the Court of Appeal in the Hampton *v.* Glamorgan County Council 15] 84 L. J. (K.B.) 1506) may not have ived the attention which it deserves.

will be remembered that in Crittall's case rm of builders had contracted with the ncil for the erection of a school. The tract provided for subletting, and the builders e authorised to sublet certain ironwork. architect having invited a quotation from plaintiffs, specialists, the builders were cted to place the order with them. When plaintiffs had received two instalments in ment from the builders the latter stopped ment, having become insolvent. The plain- completed the contract after some corre- ndence with the Council, and were suing Council for the balance of the amount due their contract. The plaintiffs alleged that contract was made with the Council, but Council denied this, saying that the builders e not their agents and the plaintiffs, by pting two instalments from the builders, elected to treat them as their debtors.

r. Justice Channell, in the course of a long gment, held that even if under the contract builders were *primâ facie* the principals, as the contract was to provide something hich the Council got the benefit and which to become their property they were the principals.

this case it is to be observed it was the ders or contractors who became insolvent. it was the building owners who were held le on the above grounds.

efore considering the case in which this sion has been impugned we will refer to other case (Ramsden & Carr *v.* Chessum & s), a case which was carried to the House ords. There the plaintiffs were specialists he design and manufacture of ornamental alwork, and had supplied certain door- dles to be fitted in a cinematograph theatre ch the defendants, contractors, were erecting the owners of the theatre. The building ers went into liquidation, and the plaintiffs the contractors. In the court of first ance it was held that no sum had been ived by the contractors from the building ers in respect of these articles and that the itect had not acted as agents of the con- tors in ordering them, but as the goods been delivered to the defendants and used them there was an implied promise on their to pay for them. The Court of Appeal rsed this latter finding, but the House of ds restored it, holding that in the circum- nces the fact that the builders had used goods raised an implied promise to pay for m.

is somewhat remarkable that neither of above cases, which are of the greatest ortance to builders, are reported in the aw Reports," nor is the case to which we l now refer, Hampton *v.* Glamorgan County ncil, in which Crittall's case was dis- roved.

that case a builder had entered into a p sum contract to erect a school for the ndants in accordance with the specifications under the directions of the architect. The ification and the bill of quantities provided certain prime cost items for which provisional s were to be allowed. The architect, ing corresponded with a firm for the supply heating apparatus, directed the builder ccept his tender. The firm, the plaintiffs he action, proceeded with the work and had ed that a sum on account should be paid. architect refused to certify it to them, but it was paid them by the builder. Subsequently, the builders being unable to pay the balance, the plaintiffs sued the building owners and succeeded in the court below, but the Court of Appeal reversed this judgment and held that the contract was between the plaintiffs and the builders only, and that the defendants, the building owners, were not liable. The Court of Appeal in delivering their judgment disapproved of the decision in Crittall Manufacturing Company *v.* London County Council and also that in Young & Co. *v.* White ([1911] 76 J. P. 14).

In this latter case the plaintiffs were specialists in steelwork, and tendered to the architect for the execution of certain work on a building at that time knowing neither the names of the builders nor the building owners, as apparently at that date the building contract had not been signed. The contract, when signed, contained the usual clauses as to the employment of specialists and provisional sums. Subsequently the builders gave the order for the steelwork in accordance with the accepted tender. Shortly before the builders had completed their work under the contract the architect, at the plaintiffs' request, sent the builders a certificate and a cheque for £500, stating that £150 of this was part of the sum due to the plaintiffs. The builders went into liquidation, not having paid over the £150 to the plaintiffs, and the latter thereupon sued the building owners. The Court, following Crittall's case, gave judgment for the plaintiffs against the building owners.

We have not had access to the full reports of all these cases, and therefore do not discuss them in detail, as it appears sufficient to point out that Crittall's case seems to have introduced an innovation in the accepted principles of law governing this question, since in that case it seems to have been held that the mere acceptance of the work done by a specialist implied a contract to pay for it on the part of the building owner. Of course, in every case it is a matter determined by the contract which of the parties shall engage the specialist, and, subject to the contract, a question of fact to whom the specialist gave credit. In the form of contract sanctioned by the Royal Institute of British Architects it is clearly provided that specialists nominated, selected, or approved by the architect shall be sub-contractors employed by the contractor, and this is the ordinary practice. In cases, however, where the position is not exactly defined the conduct of the parties has to be regarded and inferences drawn as to between which of them the contract was in fact made. As we understand the cases the decisions in Crittall's case and in Young & Co. *v.* White, which followed it, introduced a novel doctrine that accepting the benefit of the work rendered the building owner liable as under an implied contract, and if this be so the decision of the Court of Appeal in Hampton *v.* Glamorgan County Council disapproving of these decisions has, so to speak, cleared the air and left the law as it was.

The decision of the House of Lords in Ramsden & Carr *v.* Chessum does not conflict with the decision of the Court of Appeal in Hampton's case, because it will be observed that in Ramsden's case the question was not whether the building owner was liable, he being the person insolvent, but whether the contractors were liable, and the acceptance and use of the goods by the contractors in the performance of their contract was held to imply a contract to pay for them.

In the correspondence which appeared in our pages after the decision in Crittall's case various suggestions were put forward as to how the position of the parties to a contract—the building owner, the contractor, and the specialist—was to be adjusted, and perhaps it was assumed too much that none of these parties were free agents, but were subject to the presumptions raised by the law where the absence of express contract requires such presumptions to be made in law. We are always impressing upon business men the fact that much litigation can be saved by the parties to any transaction entering into an express and clear contract, but the exigencies of business seem to prevent them from doing so, and they rely on custom or on some document drawn in a general form which in the end involves litigation. This is especially the case in charter-parties and building contracts, both of which give rise to more litigation than any other form of contract, and both of which have another peculiarity in common, that both the captain of the ship and the architect have to act in a dual capacity, thus raising complicated questions as to agency.

All questions such as are raised by the above decisions could be so dealt with by carefully expressed contracts as to avoid the necessity of litigation; but in addition to this the parties before entering into onerous contracts should take some steps to satisfy themselves of the pecuniary position of those to whom they intend to give credit. It must be admitted that some of the litigation of the above character has been due to an attempt to adapt the contract to the unforeseen and altered conditions brought about by the insolvency of one of the parties.

Builders' Liability to Persons on the Premises.

Under the above heading, in our issue for November 19 last, we gave a short summary of the law, showing the varying degrees of liability imposed on contractors towards persons visiting the premises according to whether such persons were trespassers, licensees, or invitees.

The case which suggested our observations was Elliott *v.* C. P. Roberts & Co., the facts of which case are set out in our Law Reports, November 12, and in the article we refer to. Our readers may have observed that this case has since been appealed (see our Law Reports, May 5), so we refer to it again in order to explain that, although the Court of Appeal have ordered a new trial as they disagreed with the conclusion the learned judge had arrived at in that case, this has in no way rendered the statement of the law contained in our article inaccurate. In the court below the jury had awarded the plaintiff £2,000 damages, but the learned judge had entered judgment for the defendants on the ground that the plaintiff was on the premises as a licensee only. It will be remembered that the defendants were a firm of builders under contract to erect some schools for the London County Council, and it was a term of the contract that facilities should be afforded for other tradesmen employed by the Council to come upon the premises. The plaintiff came upon the premises in this capacity, and whilst crossing a gangway of planks unfenced and unfixed at either end sustained personal injuries. The judge held him to be a licensee, and, as we showed, the position of a licensee is that he takes the premises in the condition he finds them in, but must not be exposed to hidden dangers. There were no hidden dangers, so the judge in the court below entered judgment for the defendants.

The Court of Appeal, however, have taken a different view of the plaintiff's position, holding him to be an invitee, and, as will be seen by reference to our former article, this raises other considerations. An invitee is entitled to expect that the occupier of the premises will have taken reasonable care to prevent the invitee from being exposed to risks from dangers which are within the knowledge of the occupier or should be known to him. The questions whether such reasonable care has been taken by the occupier and whether the invitee has been guilty of contributory negligence are questions for the jury, and hence it will be seen that a new trial was ordered, since when the Court of Appeal took a different view of the status of the injured man it was necessary to have the opinion of the jury on these facts.

The Court of Appeal seems to have intimated that, although the gangway in question did not constitute a hidden danger, it was of a character which might require inspection and adjustment, and there was evidence upon which the jury might have come to the conclusion that failure on the part of the defendants in this respect was the cause of the accident to the plaintiff. As the Court agreed neither with the evidence upon which the verdict of the jury had been given, nor with the judge's ruling in favour of the defendants, a new trial was ordered, but it may be noted that the Court intimated that if the question of a new trial had depended solely on the question raised by the defendants in one part of their cross appeal, as to the damages awarded being excessive, on this ground alone the Court would not have ordered a new trial.

The Lumsden Case.

We may draw our readers' attention to the letter of the Secretary of the Land Union which appeared in the *Times* on May 23 last, in which he sets out a letter from the Chancellor of the Exchequer in which it is stated that the Board of Inland Revenue have decided to allow the payment of increment value duty in cases affected by the judgment in Lumsden's case to remain in suspense, whether such duty became payable on an occasion before or after May 7, 1913, until Parliament has decided whether the legislation promised in connection with that case is to be retrospective or not.

LAW REPORTS.

Surveyor's Solus Awards: Case under the London Building Act.

In the Shoreditch County Court on May 18 his Honour Judge Cluer held that the prevailing custom of third surveyors, appointed in connection with awards under the London Building Act, of signing the award solus was illegal, as all such awards must be signed by at least two of the surveyors, or all the three if they agree, the one on each side and the third appointed to arbitrate between the two. The case came before the Court by way of an appeal, the appellant being Mr. David Morris, 98, Darenth-road, Stamford Hill, a builder, and Messrs. Clozenburg & Hopkins, Ltd., 3c, 36, Charing Cross-road, W., respondents, picture palace proprietors. He asked that a decision be reversed or modified in an award of April 10, 1916, under the London Building Act, 1894, 57 and 58 Vict., c. 213, and that it be declared null and void. He also asked for a declaration that it was not made by one surveyor appointed by the appellant and the respondent, or by three surveyors or two surveyors, as provided by sect. 91 of the London Building Act; and that the wall marked "C D" was not a party wall, but an external wall.

Mr. H. J. Turrell, barrister, appeared for the appellant, and Mr. Lincoln Reed was counsel for the respondent.

Mr. Turrell said Mr. Morris, the appellant, was the owner of a building agreement of a piece of land at the corner of Graham-road, Mare-street, Hackney, and the respondents, next to it, had a picture palace. In December, 1915, appellant wished to build on this land and employed a surveyor, a Mr. Pratt, who prepared a party structure notice under the London Building Act. Mr. Beard was the respondents' surveyor. He sent a plan which referred to a wall, but did not refer to the wall "C D"; they did not know it existed. Contract was made with a Mr. Freeman on February 1, and on the 7th he commenced to make excavations to build six lock-up shops. It was almost immediately discovered that the wall "C D" ran along what was supposed to have been a party wall. These two walls, therefore, were really externals, one belonging to the respondents and one to the L.C.C., who had granted the building agreement to the applicant. Then the respondents thought Mr. Morris was building where he ought not to, and an *ex parte* injunction was obtained from Mr. Justice Eve, the merits of the case to be tried later. The proposition, then, was that the wall "C D" was an external belonging to appellant. There was an undertaking that there should be no interference with walls "D, E, to G" until an award had been given by the surveyors. But there was no undertaking as to "C D" wall, he submitted, as it was treated as an external. Had it been a party wall it would have been dealt with. On April 10 Mr. Adams—and Mr. Adams alone—the third surveyor called in, published the award; but he submitted it was not one contemplated by the statute and not within the province of surveyors. He took upon himself to call "C D" a party wall, and he contended that there was no jurisdiction, as it was not included in the party wall notice. He went on in the award to say that "D E" was a party wall, as to which there was no dispute. He was really only asked to find when it would be convenient to start the work. After going on to other matters, Mr. Adams then dealt with costs. His Honour would doubtless know that an award under the London Building Act, such as this, unless appealed from, became conclusive in fourteen days, and he had therefore to come before his Honour. A matter that was of paramount importance was that the wall "C D" was called a party wall, in which case they had no right to have started building certainly until two months had expired.

Mr. Turrell went on to say that, as to the award itself, there was a technical point, but one of very greatest importance to all surveyors having to do with these awards, and this was that it was signed only by Mr. Percy Adams, the third surveyor, and he submitted that these references under the London Building Act were references to surveyors as arbitrators and not as umpires. If a single arbitrator, it would be published as such, but if the parties did not agree each party had a surveyor, and these two appointed a third, not as an umpire, but so that two out of three should publish an award. Sect. 91 of the London Building Act was quite clear on the point, as it said that, unless both parties concurred as to only one, then each party appointed a surveyor, and those two appointed a third. So that all or any two of them should settle the point in dispute. The parties appointed one each, and they appointed a third, but the award had to be by two out of the three to be legal. This was a very technical point, but a very serious one to surveyors under the London Building Act; these statutes should be strictly followed.

Mr. Reed said, in reply, that he did not agree there was any substance in the argument of his friend. The section of the Act, on the face of it, contemplated that where two were agreed, or the three, that the third should publish the award with one of the others; but he submitted that the language was clearly directory and not imperative, and therefore did not vitiate the award, as it had only been signed by the third. He was instructed, and believed it to be a fact, that it was a custom amongst the whole body of surveyors for the third to make his award solus. The third surveyor's fees were usually high, and it was in connection with that that the practice had grown up, and was commonly followed for the third to sign the award solus. Mr. Adams was appointed on January 3 by Mr. Pratt, the surveyor to the building owner, Mr. Beard being the surveyor to the adjoining owner. If his Honour looked at the matter with very technical eyes, he contended that he would agree that this was satisfactory compliance with the Act.

Judge Cluer: It rather contradicts your theory. It says if the parties don't agree with one surveyor, they can have one each, and they can appoint a third.

Mr. Reed: The effect in appointing the third is really getting back to the one, as the third is the decisive one in the matter.

Judge Cluer: Then it is an unanswerable point if it meant that. I will not agree to one, but you appoint two, and then the two tell you you must be satisfied with one, as we are going to appoint him as a third.

Mr. Reed: I say the language of the Act is satisfied by the two agents appointing one when the parties will not agree on one. That seems to have been the intention—not the intention, but the language—covered by Mr. Morris in the structure notice.

Judge Cluer: That does not give him power to elect a sole arbitrator, because he might not appoint a surveyor; he might call on a lawyer.

Mr. Reed: Then I say it need not bear the signature of two or three of them; the language is directory, not imperative. What is clearly in the minds of the framers of the Act is that when the parties did not agree a third should be called in to adjudicate.

Judge Cluer: It does not say so. Two would be sure to quarrel, but with three there must be a majority. Before any dispute has arisen the third is to be appointed in case disputes arise.

Mr. Reed: But does not the Legislatu mean that when the disputes arise he adju cates upon them? After all, the award c get no further virtue, because it bears t signature of two instead of one.

Judge Cluer: Neither does the decision justices; but there has to be two.

Mr. Reed: Those are my two main poin and then I say this is not an arbitration und the London Building Act at all.

Mr. Turrell: But what does it say in t award? The arbitrator starts his awa under the London Building Act.

Mr. Reed: I say it is not conclusive. Y have to look at the substance and not the for

Judge Cluer: If it is not an award by arbitrator under the London Building A what is it?

Mr. Reed: It may have been intended such, but it may have been an arbitration a matter entirely outside.

Judge Cluer: If this is not under the Lond Building Act, and it is under the Arbitrati Act, then I have no jurisdiction to deal wi it, and the appeal has to be dismissed, as cannot come before me. He says he makes in the matter of the London Building A and he recites quite properly the formalit he has gone through.

In giving judgment, Judge Cluer said: T first point is fatal. Mr. Adams has mistak his position. Instead of being one of three, has given this on his own account. He cou agree as to his own costs, but the surveyor to the party walls might disagree with hi He has taken the position of umpire, and t is wrong, and I must set aside the award. he takes on a job he must know what he to do. He takes the idea of umpire, and t is the general practice of surveyors. T sooner they alter it the better.

Mr. Reed: After proceedings had been tak in the High Court, and an undertaking been given not to interfere with the pa walls, on March 20 Mr. Pratt wrote: "T the next thing is to settle the party structur He sent along a drawing, and suggested t if any difference arose it was the practice call in a third surveyor. Mr. Pratt later wr that he was referring to a third surveyor, Adams, and it is then that the "C D" w is brought in. This action is because Pratt misconceived his duty, as he conside that he had to settle whether "C D" party wall instead of other matters. As Adams has been induced by both surveyors a measure to do this, I suggest no costs.

Judge Cluer: I can't see any grounds. has issued this award. If Messrs Beard Pratt don't know the law, and refer impro things to him, he as a third surveyor sho have told them what to do. I can't see the party who is successful should not have costs.

The appeal was then allowed, with costs.

NEW COMPANIES.

The undermentioned particulars of companies recently registered are taken f the Daily Register compiled by Messrs. Jor & Sons, Ltd., Company Registration Age Chancery-lane, W.C. :—

R. J. Johnson & Co., Ltd. (143,7 Registered May 9. To acquire and take as a going concern the business of R. J. John carried on by him at Worcester-place, Oxf as R. J. Johnson & Co., and to enter int agreement. To carry on business as tin and builders' merchants, builders, carr wharfingers, etc. Nominal capital, £9,00 9,000 £1 shares. Directors and subscri 1 share each.

Coerceo, Ltd. (143,834). Registered Ma To carry on business of manufacturers, mak suppliers, and importers, etc., and dealer aeroplanes, etc., and all descriptions of veh for aerial navigation, motor vehicles, cars, lorries, and conveyances and vehicles of kinds, engineers, builders, wood-workers gas, etc. Nominal capital, £20,000 in 20 £1 shares.

William Thornton & Sons, Ltd. (143, 38, Wellington-road, Toxeth Park, Liver Registered May 19. To acquire the busi now carried on at Liverpool and elsew under the style of William Thornton & and to enter into an agreement to carr business as builders and contractors, Nominal capital, £30,000 in 3,000 £10 Ordi shares.

THE BUILDING TRADE.

E DRYING AND CONSER- ATION OF TIMBER BY LECTRICITY.

CCORDING to a report in a Swiss technical building trade publication, *Hoch und Tiefhan*, a method of drying conserving timber by means of treatment electric current is being tried on the inent with success.

e effect of passing a strong electric current ugh freshly-cut timber causes a chemical ge producing rapid oxidation of certain s, combined with a physical change in the lose and its numerous derivatives which ers them better able to withstand the n of fungi, while increasing its suitability nechanical use; it also confers an aseptic ity to the sap elements remaining in the er.

e Nodon process, as it is called, is claimed so effective that in a few hours a thorough ation of the wood-sap takes place, a process h, in free air, would require several months; process reduces the hygroscopic tendency e wood so that it no longer readily absorbs ture. The process can be applied to timber with such success that in a few s a thorough seasoning takes place; in the like period similar timber untreated rocess will be hardly surface-dry.

certain amount of moisture helps to carry electric current through the timber so the process is best applied to timber in a too dry condition, in fact, as soon as ticable after felling. It can be applied he forests where the felling takes place, reducing transit weight. The electrical gy required is 3 to 6 kilowatts per cubic e.

W GOVERNMENT CONTRACTS.

War Office.

ols.—Alldays & Onions Pneumatic En- ering Company, Ltd., Birmingham; ılar-Hole Drilling Manufacturing Com- , Ltd., Beeston, Notts; Armstrong, ens, & Son, Ltd., Walsall-road, Willenhall; n & Sons, Ltd., Rea-street South, Birming- : G. Barnsley & Sons, Cornish Works, ield; J. Berry, Heath-road, Ditton, nes; Biggs, Wall, & Co., Ltd., 13, Cross- t, Finsbury-pavement, E.C., and Hampden ks, New Southgate, N.; W. G. Birkin- & Co., Derry-street, Wolverhampton; H. Blakeley & Sons, 165, Napier-street, ield; F. J. Brindley & Sons, River-lane, ield; H. Brindley, 298, Summer-lane, Bir- ham; British Plier Company, Ltd., am, Lymm, Warrington; I. Brockhouse o., Victoria Works, West Bromwich; J. ks (Lye), Ltd., Locks Works, Lye, Stour- ge; J. Brown, Imperial Works, Hales- . Birmingham; Buck & Hickman, Ltd., Vhitechapel-road, E.; H. M. Budgett, n Works, Chelmsford; Carr, Wild, & Co., . Egerton-street, Sheffield; Chadwick & cott, Ltd., Henry-street, Holborn, W.C.; hurchill & Co., Ltd., 9/15, Leonard-street, bury, E.C.; G. Collier, 3, Electric-avenue, ton, S.W.; J. Dawson & Sons, Eldon h Works, Leeds; T. Dixon & Sons, 25. er Hall-lane, Walsall; Drabble & Sander- Ebenezer Works, Sheffield; Easterbrook. rd. & Co., Ltd., Penistone-road, Sheffield: . Ellin, Footprint Works, Sheffield; J. s & Sons, Ltd., Highfield Tool and Steel ks, Heeley, Sheffield: B. Fiddian & Son. on Works, Stourbridge: T. Firth & Sons. . Norfolk Works, Sheffield: Gherling & 52. Pembroke-street, Islington, N.: W. in, sen., & Co., Ltd., Churchbridge Works, ock, Staffs: W. J. Goodwin, "Medina" al, Hayes-road, Walmley, Birmingham: . & W. Greenslade, Thomas-street, Bristol: shaw, Baxter, and J. J. Elliott, Ltd., 7, Goswell-road, E.C.; W. Hall (Sheffield), Alma Works, Sheffield; C. & J. Hamp- Ltd., Attercliffe, Sheffield: T. R. Hand & Ltd., 57/9, Snow-lane, Sheffield; H. L. Hawtin, 35/6, Wisemore, Walsall; T. Hazeon & Co., 3, Bishopsgate-avenue, E.C.; Hearnshaw Bros., John Bull Works, Sheffield; F. Herring, 22½, Cazenove-road, Stoke Newington, N.; Hewitt Bros., Field-street, King's Cross, N.; Highgate Tool Company, Ltd., Angelina-street, Birmingham; Aaron Hildick, Rutland-road, Sheffield; Hope Works Company, Shaw-road, Dudley; C. Howarth & Co., 8, Eldon-street, Sheffield; W. Hunt & Sons (The Brades), Ltd., Brades Steel Works, Oldbury, Birmingham; Ibbotson Bros. & Co., Ltd., Globe Steel Works, Sheffield: R. Ibbotson, The Sheffield Saw and Tool Company, Combined, Ltd., White Croft, Sheffield; J. Keeves & Sons, Ltd., Boundary-street, Shoreditch, E.; J. Kenyon & Co., Ltd., Sheffield; Kimberleys (Birmingham), Ltd., Balsall Heath-road, Birmingham; Lancashire Tool Company, Henry-street, Lymm, Cheshire; J. H. Laver, Rockingham-street, Sheffield; J. Lyon, Holt-lane, Rainhill, Lancs; R. Marples & Son, Ltd., Aizlewood-road, Sheffield; W. Marples & Sons, Ltd., Hibernia Works, Sheffield; R. Mather & Son, Shoreham-street, Sheffield; A. Mathieson & Sons, Ltd., 11, East Campbell-street, Glasgow: Moore & Wright, 137, Trafalgar-street, Sheffield; J. E. Morrison, Lee Croft, Sheffield: Mountford, Phillips, & Co., Ltd., Thorn Works, Brierley Hill: H. Munzing, Ltd., Union-street, Southwark, S.E.; T. Newey & Sons, Ltd., 8/9, St. Mary's-row, Birmingham; W. Park & Co., Wigan; J. Parkinson & Son, Shipley, Yorks; J. Peace & Co., Ltd., Rutland-road, Sheffield; J. H. Peace & Son, Button-lane, Sheffield: W. K. & C. Peace, Ltd., Eagle Works, Mowbray-street, Sheffield; F. G. Pearson & Co., Hope Works, Sheffield: J. Pickles & Son, Hebden Bridge, York: J. W. & H. Platt, Harrow, Middlesex; G. Plumpton, Ltd., Albion Works, Warrington; J. Powell, Ltd., Oxford-street, Birmingham; J. Price, Hagley-road, Halesowen, Birmingham; Rassmussen, Webb, & Co., 182, St. John-street, E.C.; Richardson Bros., Matthew-street, Sheffield: W. Ridge & Son, Floodgate Works, Ecclesfield, Sheffield; T. Ross & Son, Leamore, Bloxwich, Walsall: Rowland, Brindley, & Co., Bramall-lane, Sheffield; A. B. Salmen, Ltd., Harley-street, Bow, E.: Sanderson Bros. & Newbould, Ltd., Newhall-road, Sheffield: J. Shaw & Sons (Wolverhampton), Ltd., Wolverhampton; W. H. Silvester, 63, Penistone-road, Sheffield; Skinner & Johnson, Ranskill, Bawtry, Yorks; R. Sorby & Sons, Ltd., Trafalgar-street, Sheffield; Spear & Jackson, Ætna Works, Sheffield: Staffordshire Edge Tool Company, New King-street, Dudley; Stalker Drill Works, Ltd., Drill-square, Sheffield; Steel Nut and J. Hampton, Ltd., Wednesbury; J. H. Swift & Sons, Penistone-road, Sheffield: Taylor Bros., Adelaide Saw Works, Sheffield: C. Taylor's Sheffield Tools, Ltd., Bishop-street, Sheffield; H. Taylor, Ltd., 92, Arundel-street, Sheffield: Thewlis, Griffith, & Edelstein, Ltd., Warrington: R. Thomas (Birmingham, 1908), Ltd., Icknield-square, Birmingham; Thornhill, Bednal, & Co., Crispin Works, Sycamore-street, Sheffield: W. A. Timperley, Prospect-road, Heeley, Sheffield: Vaughan Bros., Eagle Works, Willenhall; W. Wain, 37, Porter-street, Sheffield; Ward & Payne, West-street, Sheffield: Waring & Gillow, Ltd., Concert-street, Liverpool: Whitehouse Bros., Ltd., District Works, Cannock: C. Whitehouse & Sons, Ltd., Cannock, Staffs; B. & I. Wilcock, Bolton Works, Wicker-lane, Sheffield: J. Wilkinson, jun. (Dudley), Ltd., Freebodies Works, Dudley: J. Wilkinson & Sons, Lye, Stourbridge; W. Wilkinson & Sons, Penketh, Warrington: Charles Willetts, jun., Colonial Works, Cradley Heath: H. Williams & Son, Lark-row, Cambridge Heath, N.E.: A. W. Wills & Son, Ltd., Park Mills, Nechells, Birmingham; Wolseley Sheep Shearing Machine Company, Ltd., Sydney Works, Birmingham: Woodcocksons, Ltd., 47, Eyre-lane, Sheffield: T Wright & Son, Newtown, Chesham.

India Office: Store Department.

Cement.—Associated Portland Cement Manufacturers, Lloyd's-avenue, E.C.

Timber.—Meredith Bros., Belvedere-road, Lambeth.

H.M. Office of Works.

Building Works, etc.—Foreign Office, erection of temporary building: Geo. Trollope & Sons and Colls & Sons, Ltd., 77, Grosvenor-road, S.W. New public offices, Westminster, southern building extension, Terazzo and Roman cube mosaic paving: Diespeker & Co., Ltd., 57-60, Holborn-viaduct, E.C. Ordinary works and repairs to buildings in the following districts to March, 1917: Brighton and Hove: W. A. Field & Cox, 20, Preston-street, Brighton; Dover, Duke of Yorks School: George Lewis & Sons, 14, Widred-road, Dover; Exeter: W. R. Brealy, 163, Cowick-street, Exeter; Leeds: W. Thompson & Sons, Skinner-lane, Leeds; Liverpool: John Williams, 70, Collingwood-street, Liverpool.

GENERAL BUILDING NEWS.

PRESBYTERIAN CHURCH, CARCROFT.

The first rural Presbyterian church to be founded in the new South Yorkshire coalfield was opened at Carcroft, near Doncaster, a few days ago. The new church is dedicated to St. Andrew. The plans were prepared by Mr. T. Brownlow Thompson, architect, of Hull, and the work of building was undertaken by Messrs. Quibell, Son, & Greenwood, Ltd., of Hull. The new church is cruciform in shape, and will accommodate well over 300 persons in addition to the choir. The building is of red stock bricks. The interior fittings are of pitch-pine. There are traceried windows filled with stained glass in both the north and south transepts and at the west end of the nave.

NEW CHURCH AND HUT, SCOTTON.

The Bishop of Ripon recently opened a new church which has been erected at Scotton Camp, near Richmond (Yorks), by the Diocesan Board for the use of the troops. The building is a design in half timber, with high, sloping roofs, and is capable of seating a congregation of 1,000. It was designed by Mr. H. S. Chorley. A new church hut has been erected a few yards away.

PREMISES, OLD KENT-ROAD.

Owing to the general expansion of business Messrs. J. Liversidge & Son, Ltd., 559-561, Old Kent-road, have considerably extended their motor body and wheel works. The extensions comprise machine, body, and rubber-tyring shops, and also large garage. The new works are constructed of fire-resisting material, and have been carried out by Messrs. Geo. Parker & Sons, 124, Sumner-road, Peckham, S.E., under the supervision of and to designs prepared by Mr. Geo. J. Clarke, architect and surveyor, 32, Bensham Manor-road, Thornton Heath, Surrey. The constructional steelwork (some 75 tons) was supplied by Messrs. Drew-Bear, Perks, & Co., Ltd., 110, Cannon-street, E.C., and the skylight glazing (some 5,600 ft.) by Messrs. Helliwell & Co., Ltd., 11, Victoria-street, S.W. The reinforced concrete roofs are laid on the architect's own system, and the average cost on the aggregate works out at 5⅛d. per foot cube.

TRADE NEWS.

Boyle's latest patent "air-pump" ventilators have been applied to the Ipswich Corporation's Tramway Department, Constantine-road, Ipswich.

Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester, are supplying their patent exhaust roof ventilators for factory now in course of erection.

A damp wall in the Mayor's house at Winchester having given considerable trouble to the Corporation, the chief sanitary inspector suggested a Pudloed cement rendering, and we understand that a permanently dry wall has been obtained.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Brick-layers.	Car-penters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Masons' La-bourers.	Brick-layers' La-bourers.	Plas-terers' La-bourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9½	9½	9½	9½	9½	9	8	6½	6½	6½
Accrington	10	10	10	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	10	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	1/-	1/-	1/-	11	10½	1/-	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11¼	10¼	8½	8½	8½
Bishop Auckland	9	9	9	9½	10‡	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10½	10½	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8¼	6½	6½	6½
Bury	11	11	10½	9	9½	10	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	9¾	8¾	6¼	7	6½
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	10	10	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	5¾	5¾	5¾
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9½	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	8¼	7	7	7
Harrogate	9½	9½	9½	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5½
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10¾	10½	10½	10½	10	10	9	8½	8½	8½
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10¾	10¾	10¼	10½	10½	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10	9	8	8	8½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	1/-	1/-	1/-	11	11½	1/-	10½	7½	7½	7½
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	9	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	9½	9	8½	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	11	10	8½	8½	9
Oldham	10½	11	10½	10	9	10	9½	7	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8½	6½*	6½*	6½*
Pontypridd	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Portsmouth	9½‡	9½‡	9½‡	9½‡	9½	8½‡	7½	7‡	7‡	7‡
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10½	10	9¼	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	10	10	10	10¼	8¾	10	9	6¾	6¾	6¾
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10	9¾	9¾	9½	9¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	8¾	8¾	9½	—	8½	7	5¾	5¾	5¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	11	11	11	11	10‡	9½	9½	7¼	7¼	7½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	10	9½	9½	9½	8½	10	8¼	7¼	7¼	7¼
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10	10	10	10¼	—	9	8	7½	7½	7½
Wigan	10½	11	10	10	9½	10¼	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	10½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	8	6½	6½	6½
York	9¾	9¾	9½	9½	9½	9½	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 2s. 6d. per week granted.

PROPOSED NEW BUILDIN AND OTHER WORKS.*

In these lists care is taken to ensure accuracy of the information given, but it occasionally happen that, owing to builc owners taking the responsibility of commenc work before plans are finally approved by local authorities, "proposed" works, at time of publication, have been actually c menced. Abbreviations:—T.C. for T Council; U.D.C. for Urban District Coun R.D.C. for Rural District Council; E.C. Education Committee; L.G.B. for L Government Board; B.G. for Board Guardians; L.C.C. for London County Coun B.C. for Borough Council; and P.C. for Pa Council.

Aberdeen.—The Plans Committee of the has approved of the following plans:—Store factory, Shuttle-lane, for Messrs. G. Molliso Sons, produce merchants, per Messrs. Wilso Walker, architects; workshop and extensio an existing one-storied building in conne with the King's Engineering Works, K street, for Messrs. John M. Henderson & engineers; alterations and additions in nection with the dwelling-house, No. 382, G Western-road, for Mr. William Hepburn, ve nary surgeon, per Mr. W. E. Gauld, archi additions and alterations in connection premises, Hutcheon-street, for the Aber Combworks Company, Ltd., per Mr. Willia Boice, engineer.

Batley.—A new warehouse is to be buil Messrs. Cook, Son, & Co., at Carr Mill, B Carr, according to plans passed by the B Corporation.

Bexhill.—The T.C. has had before it ten for painting shelters on Parade, Park Pavi etc., and these have been referred to the C man of the Highways Committee and Surveyor, with power to act.

Bridgwater.—At a recent meeting of Bridgwater R.D.C. the seal of the Council affixed to the agreement with the T.C. respec the scheme for the construction of a new roa Wembdon, the cost of which had been estim at £7,315.

Chapel-en-le-Frith.—At a recent meetin the R.D.C. plans were submitted showin probable position of the new school at Ch en-le-Frith.

Duns.—The T.C. has granted leave to Mr Scott, Duns, to rebuild a house situated a Castle-street. The plans submitted and appr showed a self-contained house in place of present tenements.

Edinburgh.—The plans for the Royal (Veterinary College, Edinburgh, have been pleted by the architect, Mr. D. M'Arthy. T.C. have given approval of a draft town- ning scheme, which is a tentative one, for area at Craigentinny, Restalrig, and Loch The area extends to 896 acres.

Foleshill.—At a recent meeting of Fole B.G. and R.D.C. a letter was received from superintendent of the Government hou scheme at Holbrooks with reference to the ments which the authorities are erecting. letter stated that the Government are pu up hutments for 10,000 girls, and also se hundred cottages in connection with Me White & Poppe's works.

Highgate.—The Prudential Company is ing an hostel at Highgate for its staf domestics.

Kensington.—The London and South-We Bank, Ltd., are proposing to carry out ce alterations to their branch bank, No. Ladbroke-grove.

London.—An effort is being made to co £1,800 for rebuilding the Church schools o Bartholomew the Great and providing a ground.

Mansfield.—The T.C. has approved plan Messrs. Wm. Hollins & Co., Ltd., for addit stories to Pleasley Vale Mills.

Narberth.—Plans passed by the R.D. New dwelling-house at Farmers' Arms, M clochog; new dwelling-house at the Penffordd; repairs and additions to Pe Llawhaden; and alterations to Ddol Llanycefn.

Owston.—At a recent meeting of the Donc R.D.C. it was reported that the Bullcroft Colliery Company propose to erect 300 hous the parish of Owston.

Penzance.—The B.G. has decided to r struct the workhouse laundry.

Reading.—At a recent meeting of the C.C. it was reported that estimates fo surfacing a portion of the sides of the Bath between Reading and Hungerford, and r structing the whole width of the road length of one and a quarter miles bet Hungerford and the county boundary, have forwarded to the Road Board, and altern estimates for resurfacing with tarmac and gr the granite sides of the main road between ing and Ascot have been prepared by the c Surveyor and forwarded to the Road Board

Tottenham.—Twenty new factories are erected at Tottenham.

Uruguay.—The *Diario Oficial* (Montevide April 8 publishes a Decree authorising the E tive Power to invest the sum of 19,000 (about £4,200 at current rate of exchange) i construction of a school building in the of San José.

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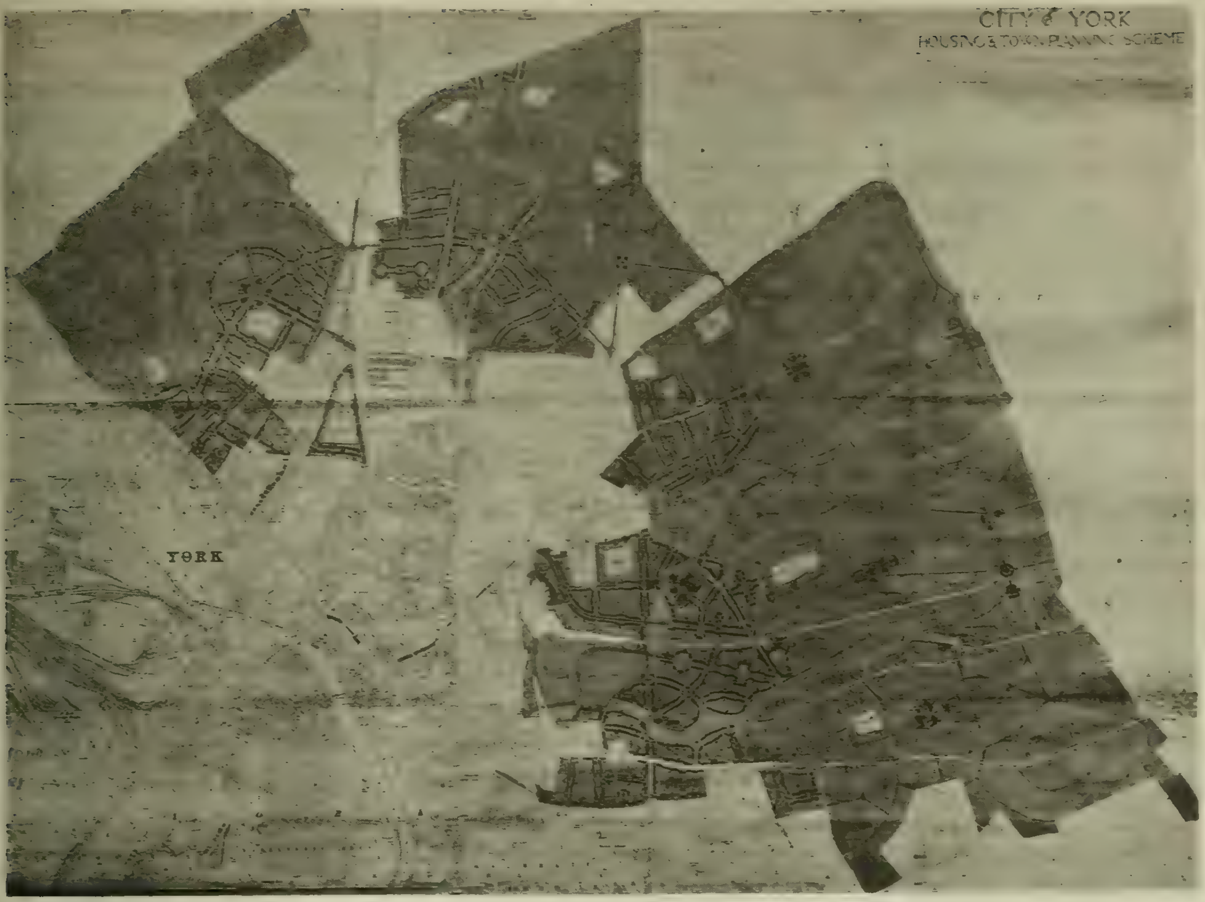
* See also our list of Competitions, Contracts, on page 410.



First Premiated Design.

WN PLANNING COMPETITION, YORK.

HE competition for the town planning of suburbs of York, instituted in August last , has now been decided, and the result, h we have announced in a previous issue, s follows :—

irst premium, £100 (No. 7), Mr. R. Dann, wley, Sussex.
econd premium, £50 (No. 1), Mr. M. A. cey, Warrington.
hird premium, £25 (No. 11), Messrs. Noel ohen & H. O. Burroughs, Liverpool.
ighly commended (No. 12), Messrs. Allen, mpson, & Thorpe, London.

is remarkable that no local architect ed a place, and that the competition, ough an open one, did not attract more n fifteen competitors. This small response perhaps due to the fact that the conditions e the impression that a large amount of k and a considerable expenditure in the chase of Ordnance maps would be involved, which the premiums were rather disproportionate. It is likely, however, that the ueness of the conditions as to the appointnt of an assessor had a more deterrent effect . The profession would have had more fidence in the competition, and would have n more prepared to risk labour and expense, it been announced at the beginning that fessor Abercrombie would be asked to udicate. Owing to the small number of petitors and the abstention of many firms se prowess in this direction is acknowledged. winner has outpaced his competitors and n his premium without superhuman rt.

Ve gave, in our issue of September 10, 1915, olan of the ground to be dealt with. The as to be treated primarily were numbered 2. and 3, and the schemes were required to l "in broad outline" with (1) new main ds for developing building land and conting outlying districts where practicable; the provision of open spaces, recreation unds, residential areas, industrial zones, and sites for public buildings. These three areas lie upon the north and west of the city, but the districts stretching right round the other sides of the city were to be shown only on the small-scale plans, and the competitors' views might take a form no more detailed than "observations." The areas scheduled comprise 9,031 acres, and reach from the city's present extent to an average of about three miles from the Minster.

Before the competition the ground had been broken by the authorities, who indicated certain arterial roads, and a great circumferential road encircling the city, which were to be incorporated in the scheme, thus determining the initial and main lines of the whole development, the most difficult and hazardous part of the work.

York has taken its development seriously just in time. It is a city large enough to be able to look forward to considerable growth and industrial progress during the next thirty years, but not so large that it has already stultified its chance of a successful town-planning scheme by encircling itself with a belt of wretchedly-planned suburbs which crush the city and poison the country, the unfortunate experience of so many of our large towns. The charm of the city is romantic, and of the Middle Ages. It grew for centuries, of course, within the bounds of its own walls, and cramped itself together inside them when another town would have spread outwards. There is therefore no chance of the city being the focal point and the climax of a great scheme. It is like a closely-guarded museum with narrow winding aisles but enchanting exhibits, among which continual delights surprise one at every turn. That is how the cathedral comes upon one. Though there is some majesty in the exterior, the real stroke of grandeur is reserved for him who will enter the south door and take in the superb view across the transept. Then he has seen the best. Outside the walls there is the sense that the city in bursting its bonds revelled rather too riotously in its freedom; the next stage of development has been without much discretion. Then come the areas which are the subject of the competition, the line where the roads change on the plans from the matter-of-fact black-and-white of the Ordnance map to the glory of trees and grass borders in which the competitive chartographer delights. A glance at this transition area shows that the time was ripe.

The First Premiated Design.

No doubt can be entertained that the design placed first is the best submitted. The author avoids the mistake which many competitors make of regarding each area as a separate entity and planning a great civic centre for it. Development on such lines would be unnatural and very defective economically. It must be remembered that it is York which is to develop. This surrounding country, even if scheduled in three separate areas, will be utilised according to the outward growth of York. Local centres there must be, but they should be of reasonable dimensions and properly subordinated to the whole. This moderation is very well exhibited in the first design. There are enough local points with just enough vehemence in their architectural treatment to punctuate the scheme and make it intelligible and for the proper concentration of public buildings. The open spaces are planned with delightful variety, the public buildings well placed in relation to the vistas, and some effective views of the cathedral and of other outstanding buildings obtained down the axial lines. The roads are not rigidly geometrical. In fact, the plan gives a general impression of sinuous lines, and this elasticity enables the author to draw out his roads with great freedom and to bring them as he will and with fine *sforzando* into the squares or circuses at the strategic points. He thus avoids nasty and acute angles at his junctions, and the latter are the more effective because of the contrast of their symmetry with the freedom of the roads themselves. Mr. Dann also shows great discretion in the shaping of his building plots. There is usually an irresistible drift towards triangular spaces, with all the awkwardness which in practice they involve. The spaces in this scheme are roughly oblongs.

Mr. Dann's design shows more care than any of the others in the transition from the areas already built on to the new ones. In area No. 2, which lies beyond some hundreds of existing cottages, he assigns a very awkwardly shaped plot to a large recreation-ground which will be used by the juvenile population of these present streets. He is hardly tactful, however, in view of its probably uproarious use, in surrounding it by his new houses. A good opportunity for a factory area, close to a mass of railway sidings, is seized, and presently, passing down a main approach road, one is clear of the old streets, and Mr. Dann gets into his stride. He gives a good geometrical swing to this section, where he is unhampered by awkward levels or any features which would interfere with a formal lay-out. The approach leads to a circus and the great circuit road, cleverly worked into the plan as it passes through the area, and as far as the railway permits the section is properly linked up to the others. The fact that the main approach, stopped by the park at the circus, is resumed beyond it and eventually ends in another place, presses the suggestion that it might, with greater effectiveness, have been continued straight through the park. This would spoil a good closed vista, but the vista is closed again later on. The park would not really be divided, for this modification would work in a salutary manner against the too commonly accepted idea that a railed-in park is one thing and a road is another.

Area No. 3 presents difficulties in the way of straightforward treatment through being cut in two by the River Foss, with all the indefiniteness of its flood-sodden banks. Because of this there can be few bridges, and the limitations thus imposed hamper the scheme. Nor is Mr. Dann seen here at his best. The public buildings in this area are rather lamely placed; the good planning of the through routes is, however, maintained, especially in the eastern section leading to Area No. 1.

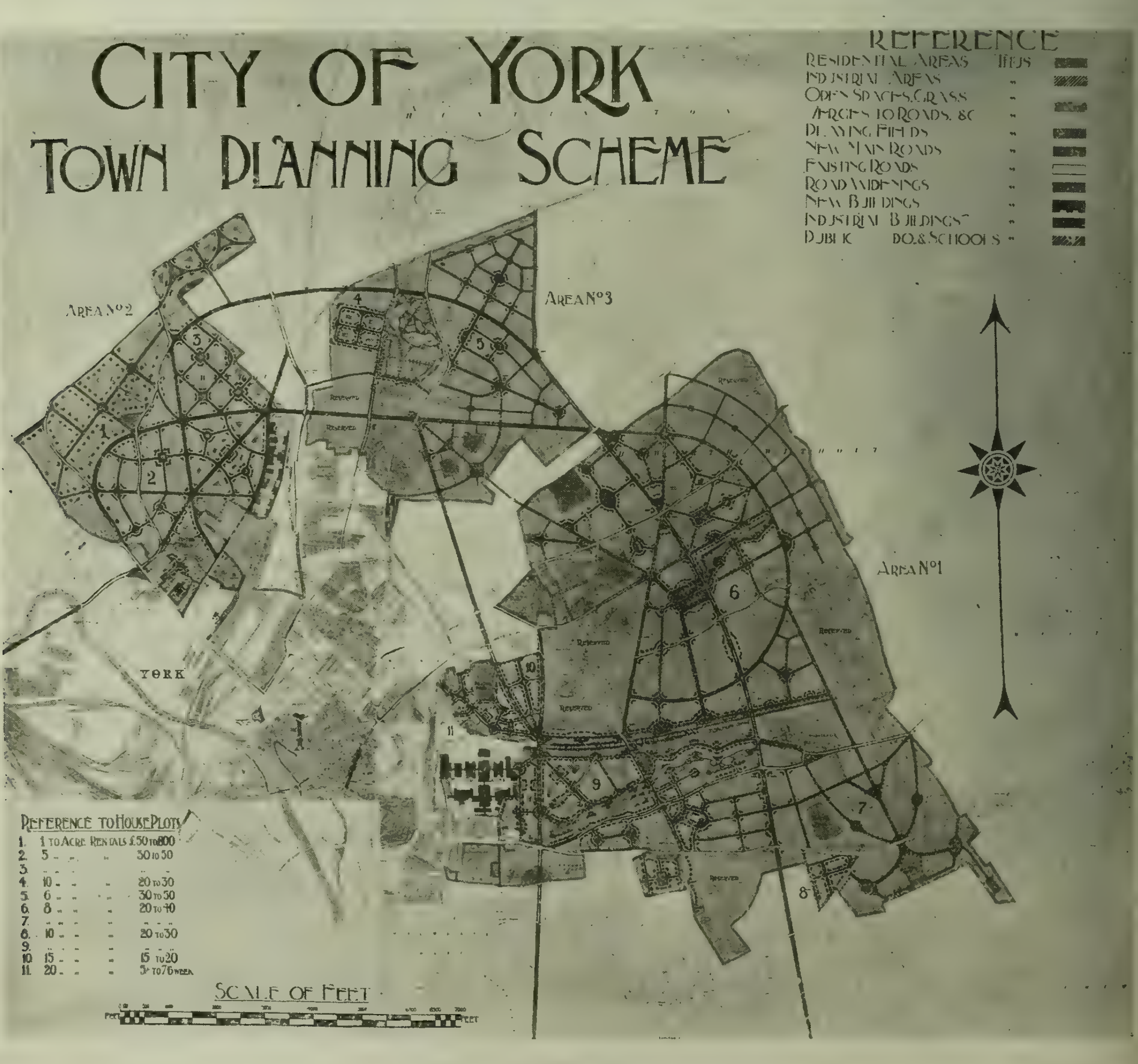
This area is large enough to lend itself to imaginative treatment, and, while it is nearly level, it occasionally breaks out into exciting eminences reaching from the 50 ft. to the 100 ft. contour line. It already contains three considerable roads radiating from the city, to which Mr. Dann adds two new ones, and widens others which are at present of small importance. It is crossed from east to west by a light railway, and the circumferential road strikes right through it. On this framework is built an eminently successful and striking scheme. The gradation from the city to the residential area is again skilfully managed by the disposition of the factories, mainly massed near the railways. A small industrial area where the light railway is crossed by an important road is a useful idea. It provides a small nucleus for a secondary industrial development, so that progress will not simply be in successive zones from the city. All to the good in this direction, too, is the author's tendency to throw his new centres well away from York, nearer to the outer than to the inner limits of the new area, and the provision of a small industrial centre right out to the west will be a chance for workmen's cottages at a good distance from the city. All the focal points are treated with freshness and dexterity and at well-calculated distances. Each is the centre of a small and not too rigid radial system, well related to its neighbours and to the main system of roads. The valley of the beck is well-treated.

Beyond the indication of the circuit road and a few useful, if obvious, linkings-up, author does not concern himself very de with suggestions as to the remaining area.

The Second Premiated Design.

The main point in which the second de differs from the first is that the encircling r are magnified somewhat at the expense of radial ones. The striking things are all on the circuit roads, along which one usu travels from one place to another, whereas treatment of the great roads to the cit comparatively undistinguished. The sch is a very sound one, and is immeasur superior to all others except No. 1. Comp with the latter, the placing of the pu buildings is not so convincing; there are many climaxes, and the author, after plan an excellent framework, is too apt to with the detail in bits, each bit emphatic so that the scheme is all small mark exclamation; the roads are continually burs out into circuses. And what would eventu work out to a monotony of excitemen depressing as a monotony of dullness (for sickens when cloyed with the one, and is m dully in sympathy with the other) is the that all these points of interest are so much a

This scheme only suggests what so n others enforce, that a larger aspect of planning on this scale is often ignored: th giving definite and individual expressio the planning and architectural treatmen different areas. This is achieved unconsci and through vicious reasons in the suburb our cities which were built long before the We have snobbishness, shabby gentility, posity, solid prosperity faithfully expre and we know by the look of their neighbour



Second Premiated Design.

he people who live at A have no dealings
hose at B, and for those in C to dine at
an epoch-making event productive of
s of social elevation entirely beyond the
those at D. But, whereas these mani-
ons of it are so evil, there is a hint of
ing good in the principle, and it is of the
ssence of natural development that, as
are going to be differences in these
ts round York, the town plan should
s them. And this is not done by merely
g a circle on all intersections of more
hree roads.

the rest, the second scheme is workman-
d thorough; there are some well-arranged
, the communication roads are well
d, and the industrial areas placed with
ion. The River Foss gives an opportunity
large park in Area 2, with an ambitious
tine aquatic treatment. This, however,
to be the only reason for a park at this
Great care is shown with the details
plan, and one improvement on the first
is that the author is not at a loss when
struck his keynote for a given section,
orks on to the very edge with the same
as that with which he plans the centre.

Third Premiated Design.

authors of the third design are more pre-
ed with the monumental aspects of their
than either the winner or the author of
cond design, and herein is largely the
e of their inferiority. They pay scant
on to detailed planning throughout;
ork with a big brush; they adroitly wipe
e awkward part of Area 2, for instance,
ark it off as an industrial area and say
re about it; in each section there is a
c *pièce de résistance* on far too grandiose
. If the buildings surrounding the vast
spaces were such as one would find in a
projet in France the effect would be
icent. But as in the main they will be
suburban dwellings the suggestion will
bly be that the Brobdingnagians designed
y-out and the Lilliputians built the

possible that the authors won their
m by the very vehemence of their
mania, though the efficiency of the
-up of the main roads no doubt brought
heme into the assessor's favour. As
thors do not condescend to work out
g smaller than this in detail, they hardly
nto comparison with the other competi-
the more modest directions in which
ve expended most of their energy.

design by Messrs. Allen, Thompson, &
is commended by the assessor. It is
d with much more care than No. 3,
onceived on the same exaggerated lines.
ndous outburst in the middle of Area 1
make York world-famous, but would
the whole project from the economic
f view. With this the authors seem to
themselves, for there is little vitality
est of the plan. It is too rigid for this
scheme. Nearly all the roads are quite
, and in many instances they are laid
h a regard for symmetry which is only
t on paper. We presume that the
is commended for its whole-heartedness
e thoroughness with which everything
ed out and drawn, for it is not distin-
by any particular sensitiveness to
s or existing conditions, or, in fact,
ything that has to do with this particular
t all.

these two schemes we come back to
eeling that its freshness, its adaptability,
general sanity mark it out as a solution
problem as it is presented by the area
It is good to see just that amount of
which gives individuality to each
and yet preserves the cohesion of the
Its elasticity will admit easily of
nodifications which the exigencies of
development are sure to dictate,
it possesses formality and symmetry
to give dignity and often really monu-
haracter to the main roads and junctions.
he traffic point of view it provides a
ked-out system of roads which are not
by any merely æsthetic considerations
equately serving the districts with which
concerned.

OBITUARY.

Mr. W. Leiper.

We regret to announce the death a few days since of Mr. William Leiper, of Glasgow, aged seventy-seven years. Mr. Leiper, a native of Glasgow, was educated at the High School of that city; he was articled to Messrs. Boucher & Cousland, and was afterwards an assistant of the late Mr. William White and of the late Mr. J. L. Pearson. He was elected a Fellow of the Royal Institute of British Architects in 1881, and served as a member of Council; he was elected A.R.S.A. in 1891 and R.S.A. in 1896; he was Honorary President of the (old) Glasgow Architectural Association in 1886 and 1894, and a Fellow, and in 1892–3 President, of the Glasgow Institute of Architects; he won the silver medal, Paris .Exhibition, 1890. Mr. Leiper was the architect of Dovanhill and Hyndland (Glasgow) churches, and St. James's United Free Church, Kilmalcolm, Renfrew; Messrs. Templeton's Factory, Kinloch Moidart; Kelly House (illustrated in the *Builder*, February 24, 1900), Knockderry Castle, Dumbartonshire, and Carndhu, Cornhill, Ballimore, and other mansions in Scotland; in Glasgow—Camp Hill Church, Sun Insurance Offices, French Renaissance in character, and the factories, after the Venetian style, on the Green; the Burgh Buildings for Dumbarton and Partick; U.P. Church, Skelmorlie; and "Red Tower," Helensburgh, for Mr. James Allan. He designed the decorations of the Imperial yacht *Livadia*; the organ-case for West Parish Church, Helensburgh; the scheme of decoration, including two mural paintings, of the Glasgow Municipal buildings; the Beacon Light, Duart Point, Mull, as a memorial of William Black, the novelist; and the Sandison Memorial Window, United Free Church, Arbroath. Mr. Leiper was appointed to the committee to adjudicate upon the competitive plans for the Glasgow International Exhibition, 1901, and was one of the architects invited to compete for the reconstruction of the Royal Infirmary, Glasgow, sixteen years ago.

Mr. R. A. Briggs.

In our last issue we announced the death of Mr. Robert Alexander Briggs, F.R.I.B.A. In January, 1910, he took into partnership Mr. Harry Le C. Browning, a former pupil of his, under the style of R. A. Briggs & Browning, of Amberley House, Norfolk-street, Strand, architects and surveyors; the dissolution of the firm was notified in the *London Gazette* of May 6, 1913. We illustrated his drawings of the Hôtel de Ville and the Church of Notre Dame, Dinant, in our numbers of January 31 and December 12, 1885, and his designs, as follows:—Three Cups Hotel, Colchester, competitive (August 15, 1885); for St. Paul's Church, Kensington (February 26, 1887); three bungalows on the Bellagio estate, East Grinstead (December 21, 1889, and April 19, 1890); dining-room and furniture, for Mr. H. Gosschalk (May 14, 1887); Cowley Manor, Gloucestershire, extensive additions, comprising eighteen new bedrooms, dining-room, billiard-room, conservatory and ball-room, sitting-room, kitchen offices, mahogany staircase, and interior decoration, mahogany panelling, etc. (December 12, 1902, with porch and piazza); house, Queen's-gate, London, S.W. (July 15, 1893); Darlington Municipal Buildings, competitive (March 16, 1895); house, Oxted (September 7, 1895); decorations and fittings in marble and ironwork, the chapel, Battenhall Mount, Worcester (May 2, 1890*); houses, Leamington (June 9, 1900, and November 19, 1904); restoration of the chapel in the north transept, and altar and reredos and screen, Jesus Chapel, and the bronze door, Worcester Cathedral (July 29, 1899); a house at Storrington (October 17, 1910); premises for Humber, Ltd., Nos. 60-4, Brompton-road, S.W., with residential flats above (July 30, 1910); a house, after the American "colonial" style (May 13, 1905); house, Johannesburg (September 16, 1905); No. 54, Kensington Park-road, W., for Mr. H. T. van Lawn (May 28, 1904), and additions to the Old Mill, Aldeburgh (September 10 and December 3, 1904). He was the architect of many country houses, amongst them being one at Farnborough for Colonel the Hon. J. Scott-Napier; Cranford House, and one for Mr. F. U. Spencer, at Leamington; at Crowborough Quarry Woods, and Marlow; Ewhurst, near Cranleigh; manor-house, Wormley; additions to Battenhall Mount, Worcester; Welwyn, Herts; for the equestrian memorial statue to Simon de Montfort, Evesham; Imperial Hotel, Hereford (in conjunction with Mr. G. H. Godsell); Royal Hotel, Cardiff; All Saints' Church, Pentonville; Queen Victoria Memorial, Liverpool, for which the first premium was awarded to him and Mr. B. Lindsay Clarke jointly; St. Saviour's Church, Sunbury; and St. John's Church, Macclesfield (in conjunction with Mr. Killmister). He made the designs for the new screen, altar, and reredos, Jesus College Chapel, Cambridge, and for the colour scheme of the reredos, St. Augustine's, Haggerston.

Mr. Briggs was the author of "Homes for the Country" (2nd edit. 1909), "Bungalows and Country Residences" (5th edit. 1901), and "Country Cottages and Homes" (1910), being collections of his designs and examples of his executed works; "The Essentials of a Country House," with seventy-one illustrations (1911); and "Pompeian Decorations," with three-colour process illustrations (1912). He was a liberal subscriber to the New Premises Fund. Architectural Association, and a member of Council Architects' Benevolent Society.

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* Two views of the interior drawn by the late Mr. C. E. Mallows.

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THE LONDON COUNTY COUNCIL.

The fortnightly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. A. F. Buxton, Chairman, presiding.

Tabard-street Scheme.—In a report submitted by the Housing of the Working Classes Committee it was stated that the cost of carrying into effect the Tabard-street, Grotto-place, and Crosby-row scheme would be £273,000, a reduction of the approved estimate by £200,000. Various causes have contributed to the very favourable result. The value of property of the class dealt with has much depreciated in recent years. The result of the arbitration in the disputed cases was also satisfactory. Another important factor in the result is the settlement of two large claims which included substantial sums in respect of trade interests. Terms having been arranged by agreement in both these cases, one claim, amounting to £59,466, was settled by payment of a sum of £16,500, while the other claim of £500,000 was settled on a reinstatement basis, involving a payment by the Council of £578 15s. only for expenses. A saving was also effected by excluding St. Stephen's Vicarage from the scheme. The Committee recommended that the estimate of £473,000 approved in respect of the cost of carrying into effect the Tabard-street, Grotto-place, and Crosby-row scheme be reduced to £273,000.

London Statistics.—Volume XXV. of *London Statistics* has been completed and is about to be placed on sale.

Southern Outfall—New Engine House.—The Main Drainage Committee reported that the enlargement of the pumping-station at the Southern Outfall and the provision of additional pumping power have been completed. The contractors for the engine-house and the constructional work generally were Messrs. Dick, Kerr, & Co., Ltd.; for the engines, Messrs. Fullerton, Hodgart, & Barclay, Ltd.; for the pumps, Messrs. Boving & Co., Ltd.; and for the boilers, Messrs. Galloways, Ltd. The total cost of the work amounts to about £94,000.

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A YEAR'S BUILDING AT AYR.

At Ayr Dean of Guild Court recently the Surveyor (Mr. John Young) submitted statistics of plans passed at the Dean of Guild Court for the year ended May 15, 1916. Twenty-five warrants were granted, the total estimated cost being £18,303. For the previous year the amount was £42,673.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (✱) ar advertised in this number:** Competitions, —; Contracts, iv.; Public Appointments, —; Auction Sales, xx. Certai conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bin themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be mad for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willin to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while eve endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

June 5.—**Pontypridd and Pontlottyn.**—Police Courts.—The Standing Joint Committee of the Glamorgan Quarter Sessions and C.C. invites tenders for (1) the erection of a new police court, etc., at Pontypridd, (2) the erection of a new police court at Pontlottyn. Plans, etc., of work No. 1 may be seen and copies of the bill of quantities, etc., obtained at Pontypridd Police Station, and the plans, etc., of work No. 2 may be seen and copies of the bill of quantities, etc., obtained at the Police Station, Pontlottyn.

June 5.—**Wolverhampton.**—Painting, etc.—Painting and colouring at certain schools, for the E.C. Forms of tender, etc., of Mr. T. H. Fleeming, 10, Queen-square, Wolverhampton.

June 6.—**Ballinaloob.**—Residence.—For the erection of a residence at Ballinaloob for Mr. S. H. Wallace, Dunseverick. Plans, etc., from Mr. Robert Robinson, New Buildings, Ballymoney.

June 6.—**Bolton-on-Dearne.**—Painting, etc.—The West Riding E.C. invite tenders for painting and distempering at Bolton-on-Dearne Goldthorpe Council School, also for the painting of the caretaker's house. Specifications, etc., of Mr. W. H. Jones, Divisional Clerk, Education Offices, Mexborough.

June 6.—**Mexborough.**—Painting, etc.—The West Riding E.C. invite tenders for the painting and distempering in connection with the summer renovations at Mexborough Garden-street Council School. Specifications, etc., of Mr. W. H. Jones, Divisional Clerk, Education Offices, Mexborough.

June 6. — **Stanley.** — Brick Culvert. — For extending brick culvert at Hustle Down, Stanley, for the U.D.C. Plans, etc., at the Surveyor's Office, Stanley.

June 7.—**Luddendenfoot.**—Rebuilding.—For rebuilding mill, Luddendenfoot, S.O. Yorks, for Messrs. Joseph W. Whitworth, Ltd. Plans, etc., on application at the above offices.

June 7.—**Mullingar.**—New Wing.—For the erection of a new wing to the Presentation Convent, Mullingar. Plans and specifications can be seen at the Convent in Mullingar, or at the offices of Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin. Quantities of Mr. Andrew B. Bruntz, 1, Charlemont-terrace, Kingstown. Deposit, £1 1s.

June 10. — **Gildersome.** — Rebuilding.—For masons', concreters', joiners', plumbers', plasterers', slaters', and ironfounders' work in rebuilding Maiden Mill, Gildersome, for Messrs. A. & A. Brooke. Plans, etc., of Mr. T. A. Buttery, Licentiate R.I.B.A., architect and surveyor, Queen-street, Morley, and 1, Basinghall-square, Leeds.

June 13.—**Cardiff.**—Painting.—The Corporation invite tenders for the following works, viz.:—Painting district police-stations, painting cab shelters, stripping and reslating main roof of the Cathays Police-station. Specifications, etc., of the City Engineer, City Hall, Cardiff.

June 13.—**Pendleton.**—Relaying Floors.—For relaying concrete and tile floors at the Hope Infirmary, Pendleton. Specification, etc., of Mr. E. H. Inchley, Clerk to the Guardians, Poor Law Offices, Eccles New-road, Salford.

June 14.—**Dartford.**—Painting, etc.—The Metropolitan Asylums Board invite tenders for external painting works and repairs at the Darenth Industrial Colony, near Dartford, Kent. Specification, etc., at the Office of the Board, Embankment, E.C. Mr. Duncombe Mann, Clerk to the Board.

✱ June 15.—**Potteries District.**—Repairs, etc.—The Commissioners of H.M. Works, etc., invite tenders for repairs, etc., to buildings in the above district.

June 19.—**Bristol.**—Painting, etc.—For the painting, colouring, etc., of certain schools for the E.C. Specifications, etc., from Mr. Peter Addie, Exchange, Corn-street, Bristol. Deposit, £1 1s.

June 19.—**Lanark.**—Painting.—The District Committee invite tenders for painter work of the undernoted bridges, namely:—(1) Clyde Bridge, near Motherwell; (2) Bothwell Bridge; (3) Cambuslang Bridge; (4) Prior Bridge, between Blantyre and Cambuslang; (5) Holm Forge Bridge, between Bellshill and Motherwell. Copies of the specification, etc., of Mr. Robert Spittal, Road Surveyor, District Offices, Hamilton.

No Date.—**Frodingham.**—Excavating, etc.—For Government work, comprising 15,000 cubic yds. of excavating and concreting required at Frodingham. Particulars from the Frodingham Iron and Steel Company, Ltd.

No Date.—**Llundian Fach.**—House.—For the erection and completion of a house at Llundian Fach. Plans, etc., may be seen at Rhyglwyn, Felinfach, Cardiganshire.

No Date.—**Port Talbot.**—Painting, etc.—For the repainting, etc., of the Port Talbot County Schools. Specifications, etc., of Mr. E. T. Tennant, Clerk to the Governors, Port Talbot.

FURNITURE, MATERIALS, etc.

June 2.—**London.**—Shelving, etc.—Supply to the Commissioners of H.M. Works, etc., of cases of shelving, forms, and kitchen, folding, and collapsible tables. Forms of tender of the Controller of Supplies, H.M. Office of Works, King Charles-street, Westminster, S.W.

June 3.—**Fleetwood.**—Slack.—Supply to the U.D.C. of about 2,000 tons of moderately rough slack for their electricity works over a period of twelve months. Forms of tender of Mr. A. Cottam, Clerk to the Council, Fleetwood.

June 5.—**Glasgow.**—Materials.—Supply to the Trustees of the Clyde Navigation of builders' materials, etc., for the six or twelve months commencing July 1, 1916. Specifications, etc., of the Superintendent of Stores, 16, Robertson-street, Glasgow.

June 5.—**London.**—Oilman's Sundries, etc.—Supply to the Finance Committee of Charing Cross Hospital of oilman's sundries, etc., for six months. Mr. Walter Alvey, Secretary.

June 6.—**Dover.**—Materials, etc.—Supply to the T.C. of stores, materials, and labour in the following trades for the period of six months:—Bricklayer, painter, glazier, and plumber. Copies of schedules, etc., of Mr. R. E. Knocker, Town Clerk, Town Clerk's Office, 69, Castle-street, Dover.

June 8.—**Ashford (Middlesex).**—Oilman's Goods, etc.—Supply to the Managers at their school at Ashford, Middlesex, during six months of oilman's goods, ironmongery, etc. Tender forms of Mr. F. G. Beeching, Clerk to the Managers, Ashford, Middlesex.

June 8.—**Bradford.**—Paints, etc.—Supply to the Guardians, for the period commencing July 1, 1916, and ending on September 30, 1916, of paints and varnishes, etc. Printed forms of tender of Mr. George M. Crowther, Clerk to the Guardians, Union Offices, 22, Manor-row, Bradford.

June 8.—**Isle of Wight.**—Materials, etc.—Supply to the Guardians of builders' materials, etc. Forms of tender at the Workhouse, or at the office of the Clerk, No. 30, Pyle-street, Newport.

June 15.—**Colchester.**—Materials.—Supply to the Committee of Visitors of Severalls Asylum, Colchester, of builders' materials. Forms of tender of the Clerk of the Asylum, Severalls, Colchester.

June 15.—**Woolwich.**—Materials.—Supply to the Guardians of the Woolwich Union for three months of builders' materials, etc. Forms of tender of Mr. Tom Cutter, Clerk to the Guardians, Clerk's Offices, Union Workhouse, Plumstead.

June 16.—**London.**—Materials.—Supply to the Guardians of the Lewisham Union for three months of builders' materials. Forms of tender of Mr. H. W. Wybourn, Clerk to the Guardians, Guardians' Offices, 394, High-street, Lewisham.

June 17.—**Bicton Heath (near Shrewsbury).**—Materials.—Supply to the Salop County and Wenlock Borough Lunatic Asylum, Bicton Heath, near Shrewsbury, of building material. Forms of tender of Mr. Wm. Johnson, Clerk of the Asylum.

July 1.—**Golbourne.**—Materials.—Supp the U.D.C. of builders' materials. For tender of Mr. H. Eckersley, Clerk to the C Council Offices, Worsley-street, Golbourne

No Date.—**Bracebridge.**—Oils and Pa The Visitors of Bracebridge Asylum, L shire, invite tenders for the supply of oi paints, etc. Tender forms, etc., from Mr. George, Clerk of the Asylum.

ENGINEERING, IRON, AND STE

June 7.—**Manchester.**—Capstan.—Supp the Electricity Committee of the Manc Corporation, at their Stuart-street Station electric capstan. Specification, etc., of Mr Hughes, Secretary, Electricity Department Hall, Manchester. Further particulars S. L. Pearce, Chief Electrical Engineer, son-street, Manchester.

June 10.—**Matlock.**—Tramway Cable.— to the U.D.C. of about 1967 lineal yds. of steel wire tramway cable, 3⅛ in. in circumf with manila core. Particulars from Mr D. Evans, Tramway Manager, Town Matlock.

ROAD, SANITARY, AND WATE WORKS.

June 5.—**Hebburn.**—Tar Macadam Ro etc.—For laying tar macadam roadway, nelling, etc., in Tharsis-road, Hebburn, U.D.C. Tenders, etc., at the Surveyor's Argyle-street, Hebburn.

June 7.—**Selby.**—Streets and Sewer the making of streets and sewers on la Flaxley-road, Selby, for the U.D.C. Plan of Mr. Bruce Gray, C.E., F.R.S. (Council-chambers, Selby.

June 10.—**Rosyth.**—Roads and Sewers Corporation of the City of Dunfermline a Scottish National Housing Company, invite tenders for the formation of roa sewers and the laying of water mains nection with the development now procee the Rosyth area of the city of Dunfe Plans, etc., from the Burgh Engineer office, City-chambers, Dunfermline, or fr Scottish National Housing Company, L their offices, 111, George-street, Edin Deposit, £1 1s.

June 15.—**Bedford.**—Mains, etc.—For about two miles of 3-in. cast-iron mains, necessary sluice valves, hydrants, service for the Bedford R.D.C. Plans, etc., by Mr Chapman, Surveyor to the Council. Dr etc., may be seen and specifications obtained at No. 115, High-street, B Deposit, £1 1s. Mr. W. G. Daniels, Clerk

June 15.—**Listowel.**—Main, etc.—Fo laying down of about 1,500 lineal yds. main and improvements of the intake w connection with the water supply to the Ballybunion, Co. Kerry, for the Listowel Drawings, etc., of Mr. Brian E. F. M.Inst.C.E.I., 57, George-street, Limer of Mr. Thomas O'Connell, Acting Clerk Council, Boardroom, Listowel. Bills of tities from the Engineer. Deposit, £2 2s

Auction Sales.

✱ June 5. — **Tunbridge Wells.** — Brackett & Sons will sell by auction, premises, the stock and plant of a builder

✱ June 7.—Messrs. Churchill & Sim w by auction, at the Great Hall, Win House, Old Broad-street, E.C., an assort deals, battens, boards, timbers, etc.

✱ June 8.—**London, S.E.**—Messrs. Skelding & Co. will sell by auction, Rockingham-street, Newington Causeway the stock-in-trade of iron and steel me brass founders, and wholesale ironmong

✱ June 14.—**Hayes.**—Messrs. Fuller, Sons, & Cassell will sell by auction, premises, the stock and plant of a mot and waggon builder.

✱ June 15.—**Deptford Green.**—Mr. Smith will sell by auction, on the premi stock and plant of a timber and merchant.

✱ June 20.—**St. John-street-road.**—Mr Bowen will sell by auction, on the premi stock and plant of a builder and contra

[Those with an asterisk (✱) are advertised in this issue.]

ICES CURRENT OF MATERIALS.

Owing to the exceptional circumstances which vail at the present time, prices of materials ould be confirmed by inquiry.]

Discounts off tubes and fittings and prices for L.C.C. l and drain pipes added.—Ed.

Our aim in this list is to give, as far as possible, the *rage* prices of materials, not necessarily the highest lowest. Quality and quantity obviously affect prices fact which should be remembered by those who ke use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
st Stocks	2	0	0
ked Stocks for Facings	2	12	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
ettons	1	10	0	Best Blue Pressed Staffordshire	5	0	0
st Fareham Red	3	12	0	Do. Bullnose	5	5	0
st Red Pressed Ruabon Facing	5	5	0	Best Stourbridge Fire Bricks	4	15	0

AZED BRICKS—

st White, Ivory, and Salt Glazed Stretchers	13	7	6	D'ble Str'tch'rs	18	17	6
eaders	12	17	6	Double Headers	15	17	6
oins, Bullnose and 4½ in. Flats	16	17	6	One Side and two Ends	19	17	6
				Two Sides and one End	20	17	6
				Splays and Squints	18	7	6

Second Quality £1 per 1,000 less than best.

	s.	d.	
ames Ballast	8	3	per yard, delivered.
ames and Pit Sand	8	6	,, ,, ,,
st Washed Sand	9	6	,, ,, ,,

Per ton, delivered.

	£	s.	d.		£	s.	d.
st Portland Cement	2	5	0	..	2	8	0

Do. £2 1s. alongside in 80-ton lots.
rrocrete 2s. 6d. per ton extra on above.
st Ground Blue Lias Lime .. 1 5 6 at rly. depôt.

OTE.—The cement or lime is exclusive of the ordinary charge for sacks.

rey Stone Lime .... 18s. 0d. per yard delivered.
ourbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
ATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1	7
o. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1	8¾
o. do. delivered on road waggons, at Nine Elms Depôt	1	9¼
ORTLAND STONE—		
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W.R., per ft. cube	2	5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½

White basebed, 2d. per ft. cube extra.

ANDOM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
ncaster in blocks	2	0	Closeburn Red Freestone	2	2
eer in blocks	1	7½	Red and White Mansfield Random block	2	9
rinshill in blocks	2	4	Yellow Magnesian Limestone do. do.	3	3
arley Dale in blocks	2	5			

ORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
capled random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
in. sawn two sides landings to sizes (under 40 ft. super.)	2	5
in. rubbed two sides, ditto	2	8
in. sawn two sides slabs (random sizes)	1	0½
in. to 2½ in. sawn one side slabs (random sizes)	0	8¼
½ in. to 2 in. ditto, ditto	0	6¾

ARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
capled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
in. sawn two sides landing to sizes (under 40 ft. super.)	2	3
in. rubbed two sides ditto	2	7
in. sawn two sides slabs (random sizes)	1	0
in. self-faced random flags	0	5

TILES.

Per 1,000 f.o.r. London.

	£	s.	d.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2	12	6
Ornamental ditto	2	15	0
Hip and valley tiles (per dozen)	0	5	6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£	s.	d.
Best Blue Bangor Slates, 20 by 10	11	16	0
First quality ,, ,,	11	10	0
,, ,, 16 by 8	5	15	0
Best Blue Portmadoc, 20 by 10	11	13	6
First quality ,, ,,	11	3	6
,, ,, 16 by 8	5	15	0

WOOD.

BEST BUILDING REDWOOD.

Imported sizes.	£	s.	d.		£	s.	d.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	33	10	0	..	34	10	0
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	32	10	0	..	33	10	0

Per standard.

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

	£	s.	d.		£	s.	d.
Battens: 2 in., 2½ in., and 3 in. by 8 in.; 2 in., 2½ in., and 3 in. by 7 in.; 2 in., 2½ in., and 3 in. by 6 in.; Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.; 3 in. by 4 in., and 3 in. by 4½ in.	31	10	0	..	32	10	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0				
Seconds	1	0	0	less than best			
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 10	0	0	..	—		
Stocks very limited.							
	Per load.						
Sawn pitch pine logs (about 35 cu. ft. average)	12	0	0	..	13	10	0
Do. 6 in. to 10 in.	10	0	0	..	11	0	0
	Per standard.						
Best Pitch Pine Deals	34	0	0	..	35	0	0
Under 2 in. thick	0	10	0	extra.			

JOINERS' WOOD.

	£	s.	d.		£	s.	d.
White Sea First Quality Red: 4 in. by 11 in.	39	0	0	..	40	0	0
3 in. by 11 in., and 2 in. by 11 in.	38	0	0	..	39	0	0
4 in. by 9 in.	37	0	0	..	38	0	0
3 in. by 9 in., and 2½ in. by 9 in.	36	0	0	..	37	0	0
9 in. by 11 in. boards	1	0	0	more than deals.			
7 in. and 8 in. battens	33	0	0	..	34	0	0
7 in. and 8 in. boards	1	0	0	more than battens.			
Archangel White Deals—							
Best 3 in. by 9 in. and 10 in. and 11 in.	36	0	0	..	37	0	0
Seconds, do.	2	0	0	less than best.			
U.S. Battens	30	0	0	..	32	0	0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—	Per square actual.						
1¼ in. by 6½ in. planed and shot	1	16	0	..	1	19	0
1¼ in. by 6½ in. planed and matched	1	16	6	..	1	19	6
1 in. by 6½ in. planed and shot	1	9	0	..	1	12	0
1 in. by 6½ in. planed and matched	1	9	6	..	1	12	6
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1	4	0	..	1	6	0
1 in. by 6½ in. do.	1	10	6	..	1	12	0
Columbian or Oregon Pine, best quality	Per standard. 42	0	0	..	44	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.			
Oddments	39	0	0	,,			
Seconds, regular sizes	43	10	0	,,			
Oddments	37	10	0	,,			
Kauri Pine—Planks per ft. cube	0	8	0	..	—		
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super, as inch	0	1	0	..	0	1	3
¾ in. do. do.	0	0	10	..	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0	1	0	..	0	1	4
Cuba Mahogany	0	1	6	..	0	2	6
Dry Walnut, American, per ft. super, as inch	0	1	0	..	0	1	3
French, "Italian," Walnut	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	0	0	..	21	0	0
Plain Compound Girders, ordinary sections	22	0	0	..	23	0	0
Plain Compound Stanchions	23	0	0	..	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	..	21	10	0
Flitch Plates	20	10	0	..	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	..	14	0	0

(Turning extra.)

WROUGHT-IRON TUBES AND FITTINGS—

Discounts off Association Prices.

	Tubes. Per Cent.	Fittings. Per Cent.
Gas at works	55	57½
Water ,,	50	55
Steam ,,	45	52
Galvanised gas at works	30	47½
,, water ,,	23¾	45
,, steam ,,	17½	42½

Ex London 2½ per cent. less than above.

L.C.C. SOIL PIPE— London Prices.

	Pipes Coated. s.	d.	Bends. s.	d.	Branches. s.	d.
2 in.	2	4	1	8	2	0
2½ in.	2	9	1	10	2	6
3 in.	3	5½	2	0	3	0
3½ in.	3	9¾	2	6	3	6
4 in.	4	1½	2	10	4	0

RAIN-WATER PIPES, ETC.— London Prices.

	Pipe. s.	d.	Bends. s.	d.	Branches. s.	d.
2 in.	1	8½	0	11	1	3
2½ in.	1	10½	1	1	1	6
3 in.	2	2¼	1	4	2	0
3½ in.	2	8¼	1	7	2	4
4 in.	2	10¾	1	11	2	10

METALS (*Continued*).

L.C.C. DRAIN PIPES— London Prices.

4 in., 4s. 1d. .. 5 in., 4s. 10d. .. 6 in., 5s. 11d.

Per ton, in London.

IRON—	£	s.	d.		£	s.	d
Common Bars	16	0	0	..	—		
Staffordshire Crown Bars, good merchant quality	16	0	0	..	17	0	0
Staffordshire "Marked Bars"	17	10	0	..	18	0	0
Mild Steel Bars	18	0	0	..	18	10	0
Steel Bars, Ferro-Concrete quality, £18 basis price.							
Hoop Iron, basis price	20	0	0	..	20	10	0
,, ,, Galvanised	33	0	0	..	—		
(* And upwards, according to size and gauge.)							
Sheet Iron Black—							
Ordinary sizes to 20 g.	20	10	0	..	21	0	0
,, ,, 24 g.	21	10	0	..	22	0	0
,, ,, 26 g.	22	10	0	..	23	0	0
Sheet Iron, Galvanised flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31	0	0	..	—		
Ordinary sizes to 22 g. and 24 g.	31	10	0	..	—		
Ordinary sizes to 26 g.	34	0	0	..	—		
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	33	0	0	..	—		
,, ,, 22 g. and 24 g.	33	10	0	..	—		
Ordinary sizes to 26 g.	36	10	0	..	—		
Galvanised Corrugated Sheets—							
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29	0	0	..	—		
Ordinary sizes, 22 g. & 24 g.	29	10	0	..	—		
Ordinary sizes, 26 g	30	0	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23	10	0	..	—		
Best Soft Steel Sheets, 22 g. and 24 g.	23	15	0	..	—		
Best Soft Steel Sheets, 26 g.	25	10	0	..	—		
Cut Nails, 3 in. to 6 in.	24	0	0	..	25	0	0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

		£	s.	d.		
LEAD—Sheet, English, 4 lb. and up		40	10	0	..	—
Pipe in coils		41	0	0	..	—
Soil pipe		44	0	0	..	—
Compo pipe		44	0	0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

COPPER—						
Strong Sheet	per lb.	0	1	6	..	—
Thin ,,	,,	0	1	8	..	—
Copper nails	,,	0	1	6	..	—
Copper wire	,,	0	1	8	..	—
BRASS—						
Strong Sheet	,,	0	1	6	..	—
Thin ,,	,,	0	1	8	..	—
TIN—English Ingots	,,	0	2	0	..	—
SOLDER—Plumbers'	,,	0	0	11	..	—
Tinmen's	,,	0	1	2	..	—
Blowpipe	,,	0	1	4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
,, fourths	4¾d.	32 oz. thirds	8¾d
21 oz. thirds	6¼d.	,, fourths	7½d.
,, fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

		Per Ft.
⅛	Rolled plate	4d.
3/16	Rough rolled and rough cast plate	4½d.
¼	Rough rolled and rough cast plate	4¾d.
	Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white	5d.
	Ditto, tinted	6½d.
	Rolled Sheet	4¼d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	2
,, ,, ,, in barrels	,,	0	3	3
,, ,, ,, in drums	,,	0	3	6
Boiled ,, ,, in barrels	,,	0	3	5
,, ,, ,, in drums	,,	0	3	9
Turpentine in barrels	,,	0	3	8
,, in drums	,,	0	3	11
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	58	0	0
Red Lead, Dry	per ton	58	0	0
Best Linseed Oil Putty	per cwt.	0	12	0
Stockholm Tar	per barrel	4	5	0
Filocol	per cwt.	0	9	6
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	73	0	0

VARNISHES, &c.

Per gallon.

	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday*.

* Denotes *accepted*. † Denotes *provisionally accepted*.

BO'NESS.—For carrying out a modified scheme of extension at the electricity works, for the Town Council :—
National Electric Construction Co., Ltd., London,* slump sum of £12,300.

BRIGHTON.—For external painting, distempering, and tarring at the Warren Farm schools, farm buildings, cottages, etc., for the Board of Guardians :—
Bostel Bros., Ltd., Duke-street, Brighton* £290

LICHFIELD.—For supply and erection of a steel girder bridge, 34 ft. span, across the River Trent between King's Bromley and Nethertown, for the Lichfield Rural District Council. Mr. C. O. Rawstron, District Surveyor, Station-road, Lichfield :—

A. W. Walmsley	£88
J. O. Brettell & Co.	87
H. L. Johnson	85
J. R. Deacon, Lichfield*	84

LONDON.—For making up Chandos-road, Acton, W., for the Urban District Council :—
H. Morecroft* £1,093

WEST LOOE (Cornwall).—For renewal of the roof of St. Nicholas's Church, West Looe. Messrs. Sedding & Stallybrass, architects, Queen Anne-terrace, Plymouth :—

J. E. Hambly	£171 10
W. Taylor, Westwood, Looe*	165 10

◆

PATENTS.

APPLICATIONS PUBLISHED.*

6,005 of 1915.—Alfred Ernest White (National Malleable Castings Company, U.S.): Chain joints.

6,301 of 1915.—Edward Charles Robert Marks (Stokes & Smith Company, U.S.): Apparatus for applying glue or other adhesive to blanks or strips.

6,590 of 1915.—Arthur Edwards: Casements and the like.

6,602 of 1915.—George Frederick Williamson: Keys for securing railway or like rails in their supporting chairs.

6,610 of 1915.—Marc Schoffer: Building blocks.

9,098 of 1915.—Thomas William Clark: Formation of concrete constructions.

9,544 of 1915.—John Benjamin Hewitt: Smoke indicators for furnaces.

10,026 of 1915.—George Hamer Scholes: Electric junction-box.

11,189 of 1915.—John Swainson: Grates, ranges, and the like.

11,208 of 1915.—Pickerings, Ltd., and John Fothergill: Devices for guiding ropes or cables.

12,429 of 1915.—John Vaughan: Domestic fire-grates.

12,805 of 1915.—Frank Albert Stiers: Valves for street-sprinklers.

13,074 of 1915.—Rothwell Richard Grundy: Plugs and plug sockets of baths, troughs, and other like articles.

13,479 of 1915.—William Stratton Thomson: Gas pliers.

13,497 of 1915.—Nicolai Molotiloff: Detachable reinforced concrete flooring.

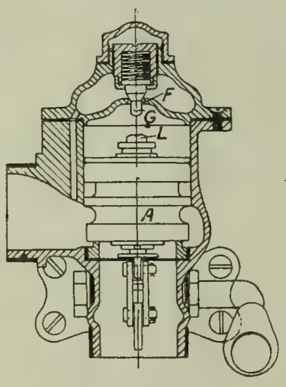
13,742 of 1915.—Gustav Schulz: Locks.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

SELECTED PATENTS.

21,586 of 1914.—Henry Lewis Doulton: Flushing valves.

This relates to flushing valves in which the port or waterway F, which controls the rate of inflow of water behind the control piston of a water-closet flushing valve A, and hence the rate of closing of the valve, is kept clean h a spring-depressed regulator or cleaning-pin which is reciprocated by the head L each tin the valve is used. The pin is formed with conical part, so that the waterway is enlarg each time the pin is lowered.



21,586 of 1914.

21,987 of 1914.—Sir Archibald Denny an Duncan Geddes Walker: Cement.

This relates to a quick-setting cement, havi an alkaline reaction, which is produced mixing substantially anhydrous gypsum wi 1 to 10 per cent. of Portland cement.

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TO CORRESPONDENTS.

NOTE.—All communications with respect to litera and artistic matters should be addressed to "TH EDITOR" (and not to any person by name); tho relating to advertisements and other exclusively busine matters should be addressed to THE BUILDER LT and *not* to the Editor.

All communications must be authenticated by t name and address of the sender, whether for publicati or not. No notice can be taken of anonymo communications.

The responsibility of signed articles, letters, a papers read at meetings rests, of course, with the autho

We cannot undertake to return rejected communic tions; and the Editor cannot be responsible for drawin photographs, manuscripts, or other documents, or models or samples sent to or left at this office, unl he has specially asked for them.

All drawings sent to or left at this office for conside tion should bear the owner's name and address either the face or back of the drawing. Delay a inconvenience may result from inattention to this.

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N.B.—Illustrations of the First Premiated Design any important architectural competition will always accepted for publication by the Editor, whether th have been formally asked for or not.

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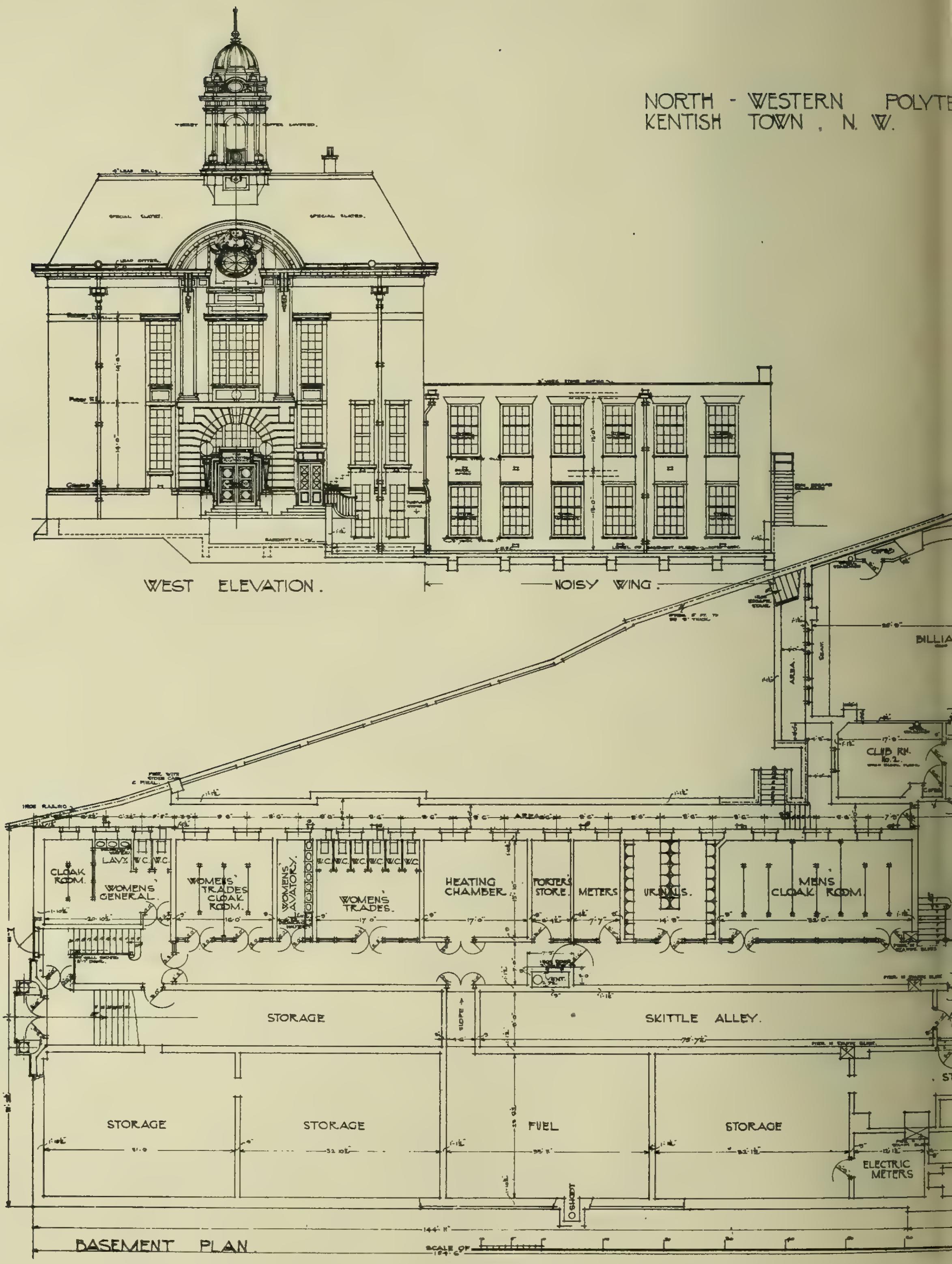
NORTH - WESTERN POLYTE
KENTISH TOWN, N. W.

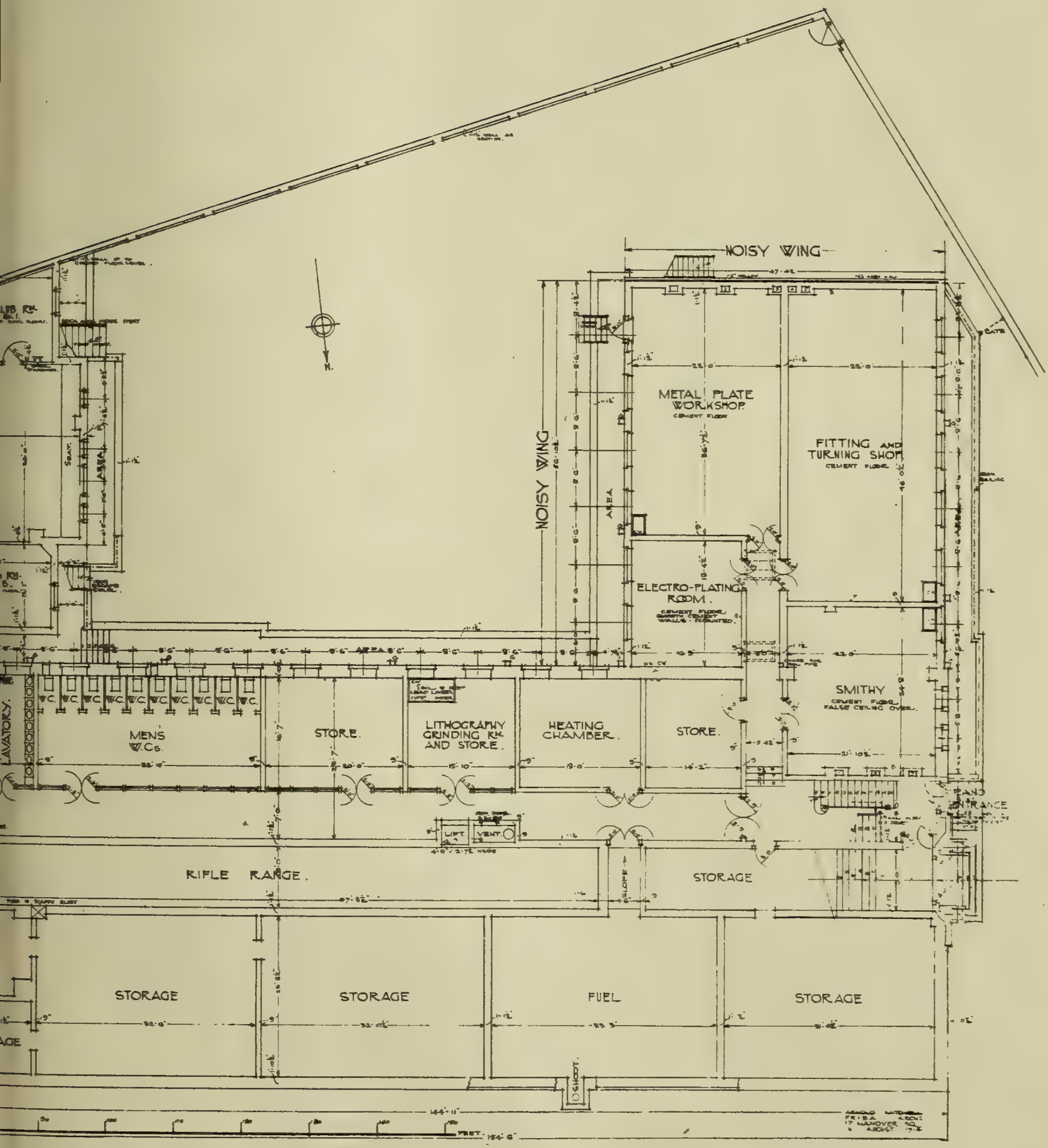

WEST ELEVATION.

NOISY WING.

BASEMENT PLAN.

MR. ARNOLD MITC

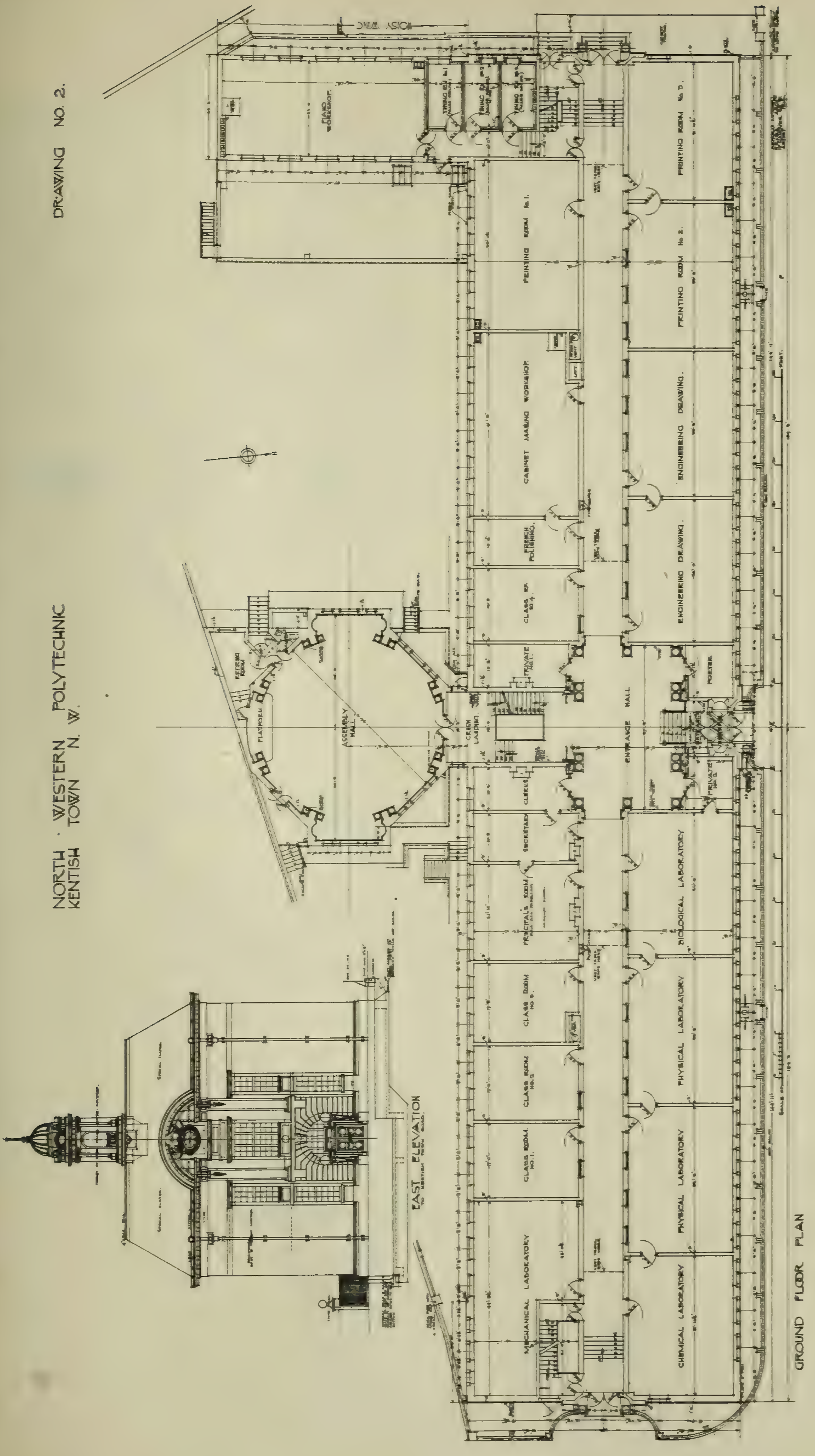
DRAWING No. 1.



A., ARCHITECT.

DRAWING No. 2.

NORTH · WESTERN POLYTECHNIC KENTISH TOWN N.W.



MR. ARNOLD MITCHELL, F.R.I.B.A., ARCHITECT.

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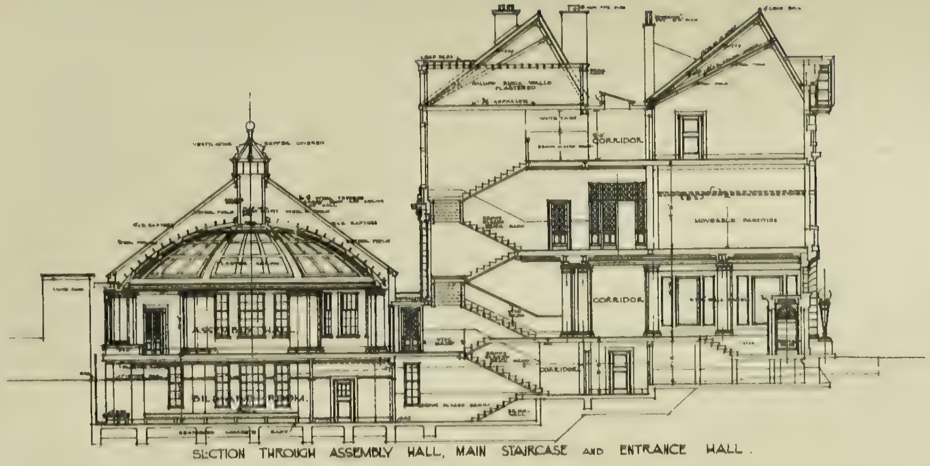
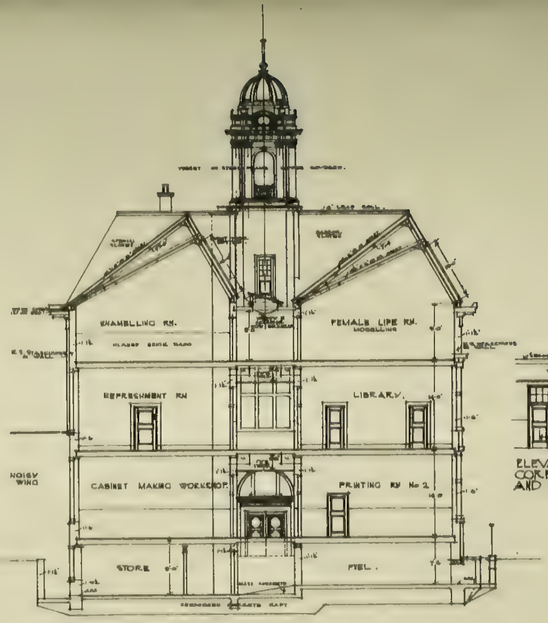
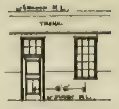
KENTISH TOWN, N.W.



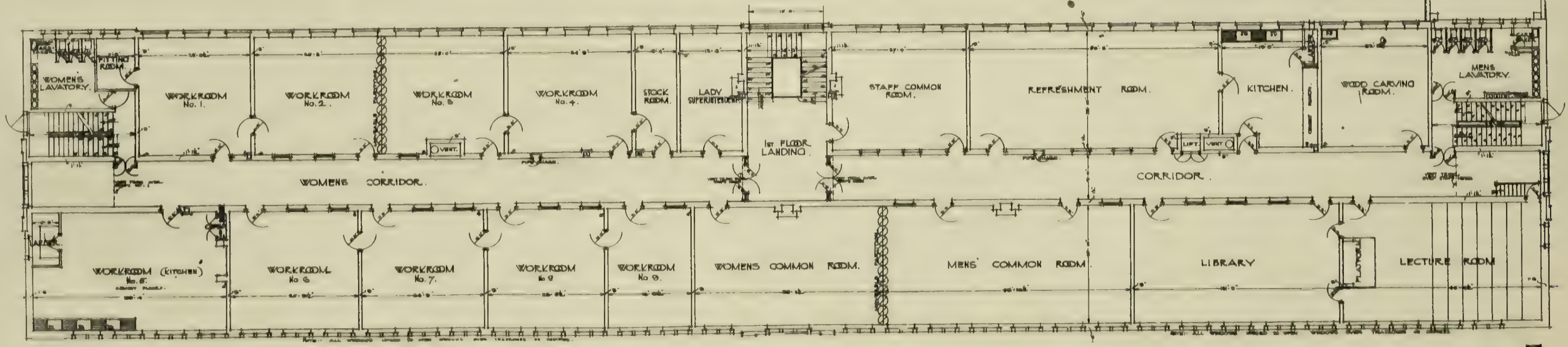
SECTION THROUGH ASSEMBLY HALL, MAIN STAIRCASE AND ENTRANCE HALL.



CROSS SECTION.



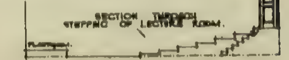
ELEVATION OF CORRIDOR DOORS AND BORROWED LIGHTS.



Arnold Mitchell
F.R.I.B.A. Archt.
17 Hanover Sq. W.
August 1914

FIRST FLOOR PLAN.

SCALE OF FEET.



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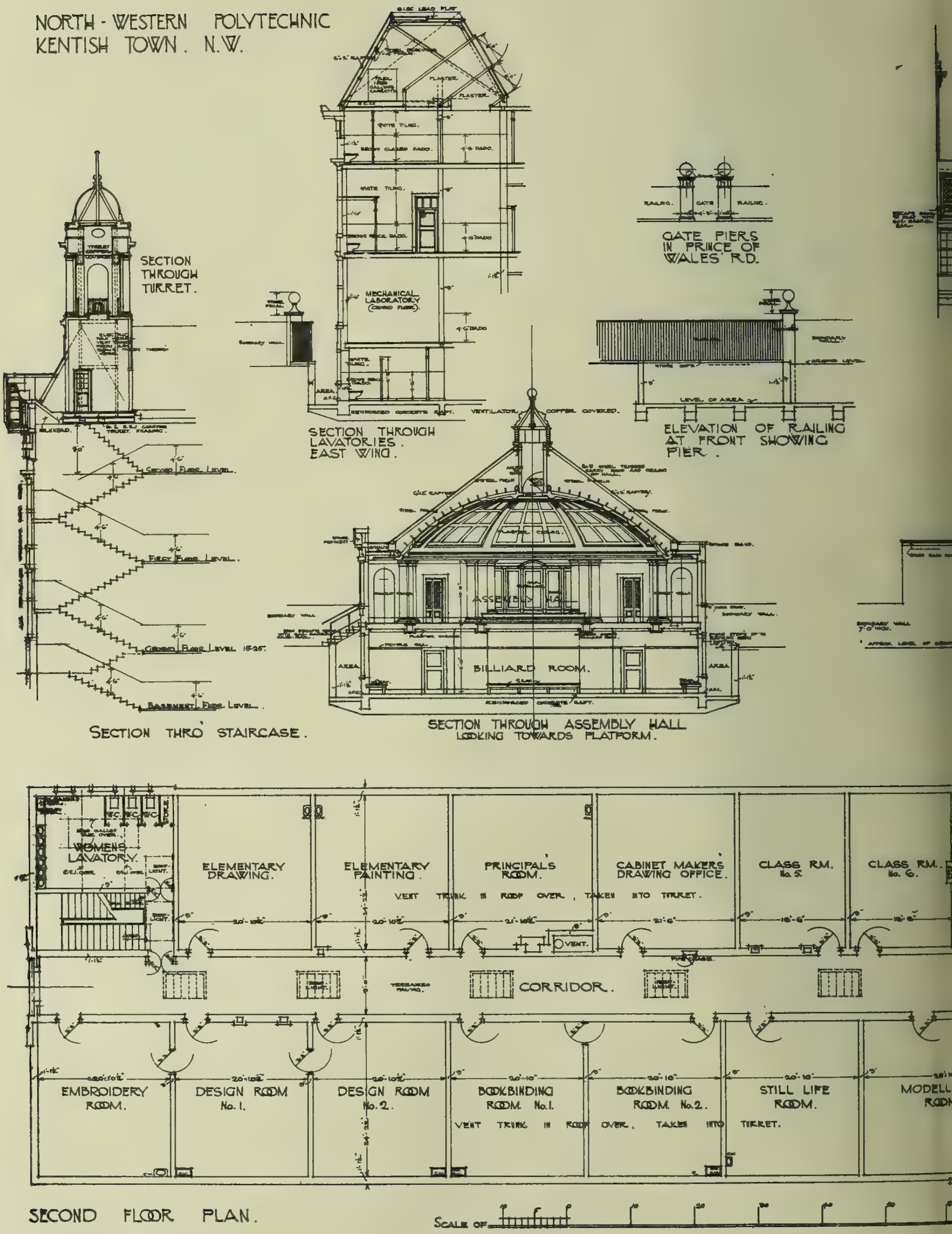

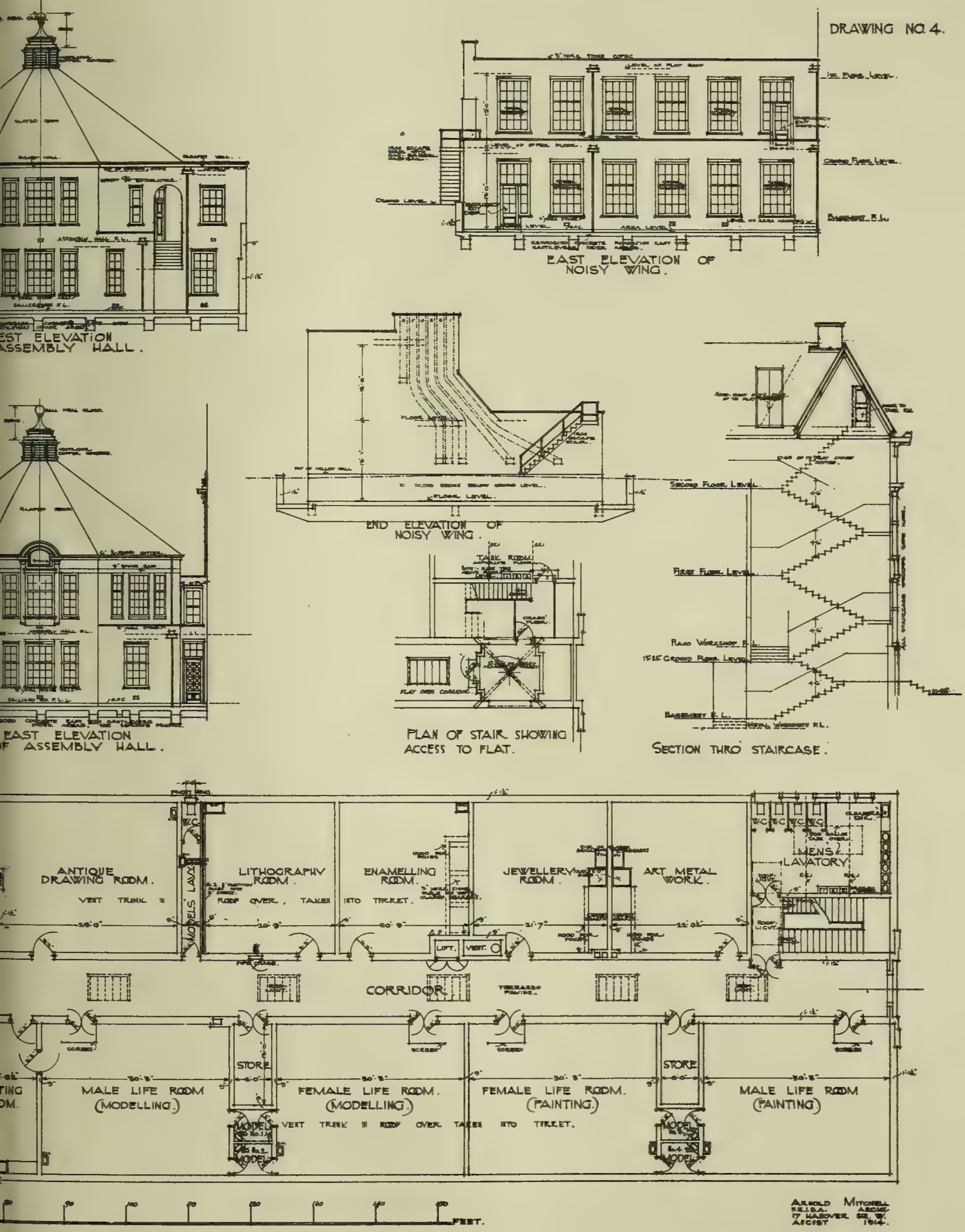

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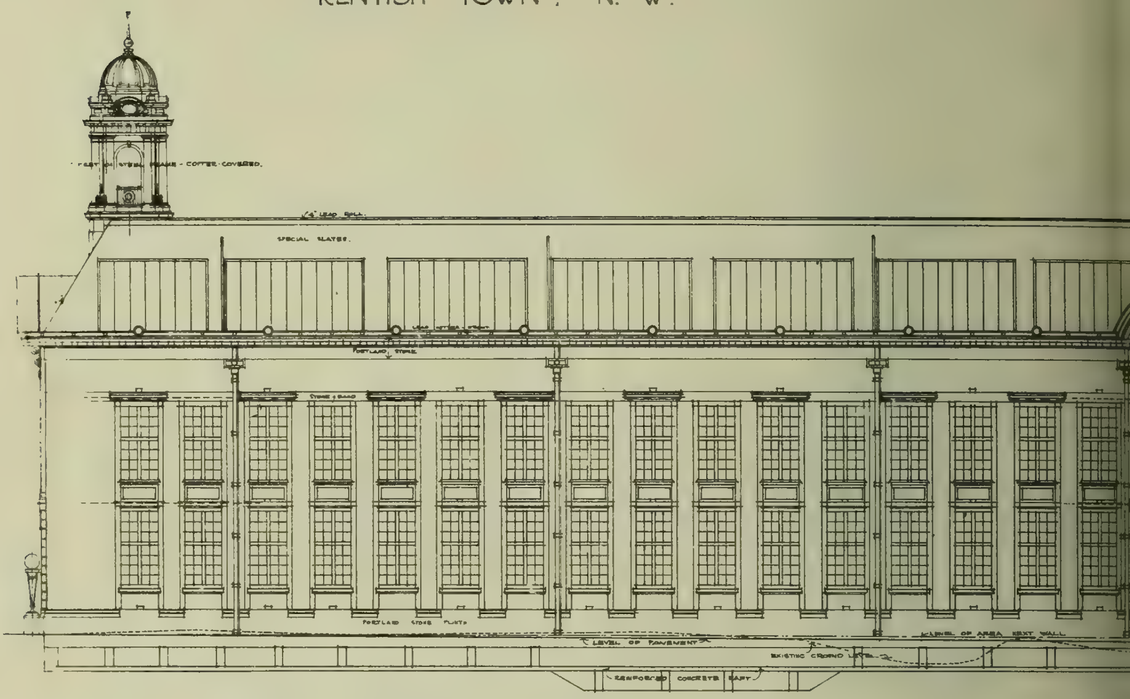
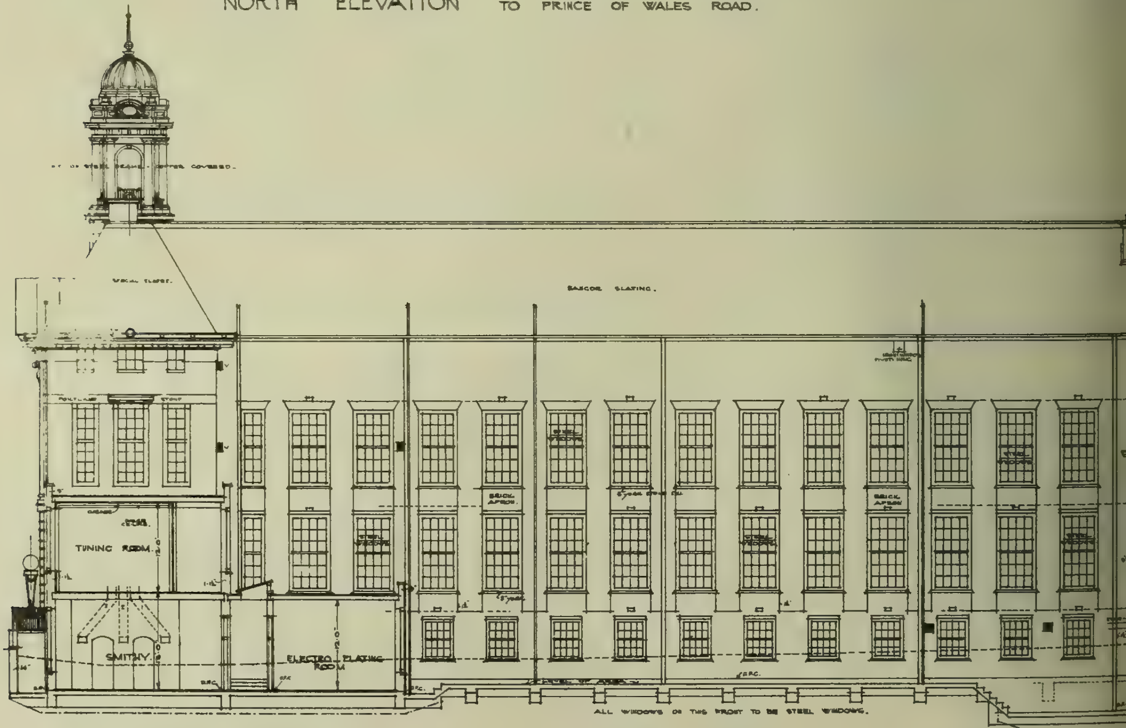


NORTH ELEVATION TO PRINCE OF WALES ROAD.



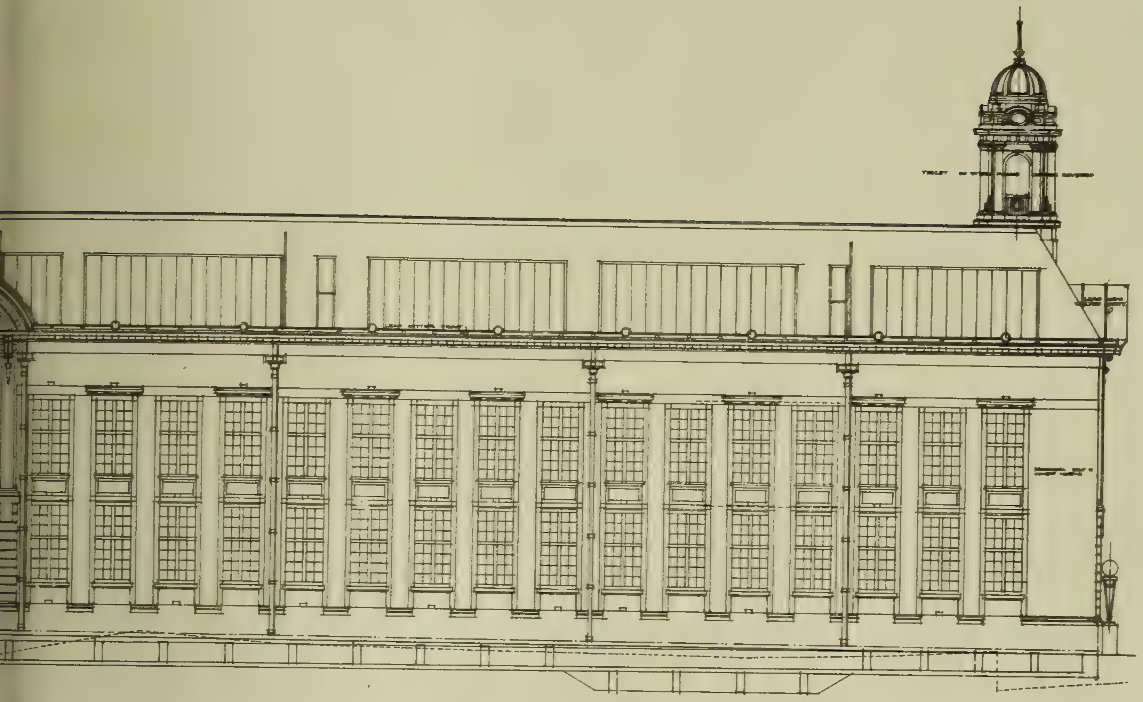
SECTION THROUGH NOISY WING.

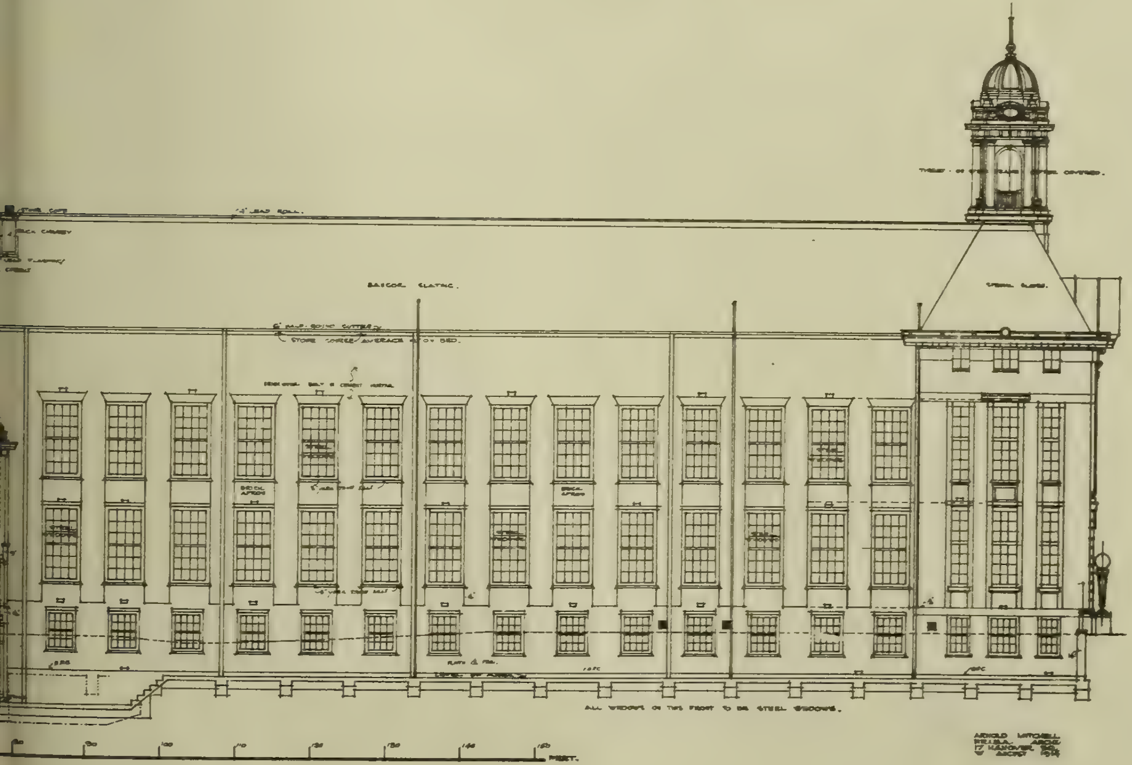
SOUTH ELEVATION

SCALE OF

MR. ARNOLD MITC

DRAWING NO. 5.





A., ARCHITECT.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3827. JUNE 9, 1916.

COMPREHENSIVE STREET DESIGN.

THE architect, as well as the amateur who views this subject with disdain, has little sympathy for schemes of rebuilding projected to secure the amenities of cities. The matter is no longer one of controversy, for we have long since passed e stage when the body of opinion voted for individualistic eedom in design as opposed to well-regulated systems of nsistent architecture. Neither can it be put forward that e present crisis is inopportune for such theories to be mooted. ıe discipline of the war points the definite moral that a new ler of things must be conceived, and speedily, for with the ːurn of peace and the consequent influx of labour only drastic organisation can prevent a repetition of the chaos which for e past fifty years has disfigured the streets of London and the ies of the provinces. The destruction of Sackville-street, ıblin, shows how intimately the conflagration of Europe has fected a capital city well within our insular boundaries. ıere are other instances which will be referred to *in seriatim.* is just as simple for local authorities to frame certain gulations governing the height and material of street ontages as it is to regulate the thickness of walls and the servance of sanitary rules. This point could be carried rther, especially where existing frontages of 300 ft. are about be rebuilt. It will be argued that designs prepared by an chitect for a portion of such a frontage would not be accepted another called upon to complete the block, or that a ilding required for a warehouse could never be worked into portion of a composition in which the majority of premises ould be designed as offices. This theory is false, because it is ident that the conditions of city life have automatically gregated diverse interests into different quarters. There a shipping centre, where the offices of the shipping mpanies are found; a bankers' centre, such as Lombard-reet; shopping centres, similar to Cheapside, the Strand, egent-street, Bond-street; merchants' centres, like Moorgate-reet and the tributaries near Cheapside; manufacturers' ntres, like the ill-favoured Queen Victoria-street; and gineering thoroughfares akin to Victoria-street, Westminster. ıe foregoing list does not include every category; it alone tempts to point out the rough division ordained by the ıssing of years, as well as the necessity for certain industries be near the heart of the City and at the same time within sy communication the one with the other. In the City and e West-end there are several well-designed thoroughfares, anned during the early part of the nineteenth century, the fronting of which is becoming a matter for immediate nsideration. It is neither desirable nor possible to preserve e conventional stucco façades of these streets for all time, ıt surely it is within the scope of sound politics to ensure ıat these respectable buildings are replaced by others of ıproved interest, and that a street distinguished in the ıst for ordered regularity in architecture should, despite the ıssing fashion, retain some part of the tradition with which s use has been associated. The refronting of the north side Moorgate-street is shortly to be undertaken, and unless the ity Architect seriously considers the matter with the orporation, determining the height of cornices, insisting on gularity of sky-line, and the adoption of a uniform façade r the whole block, the aspect of this restful street will be ıanged for the worse.

In the first place, owing to the absence of a controlling ody to whom all designs can be referred, the first architect the scene, commissioned to treat a small portion of the ontage, has it in his power to make or mar the aspect of a reet. Now, it should be possible in such a case, without setting in motion the whole machinery for an architectural competition—competitions of this kind being notoriously unproductive of good designs—for the City authority to ask the architect first called in to treat a portion of an extensive block to submit a comprehensive design for the whole frontage. The City authorities would have the right to approve or censure the design, to call upon architects and artists of renown for an opinion on the merits or defects of the proposition, and they would then be in a position to judge, from elevational and perspective drawings, what the street would look like when completed. The interpretation of such an idea as the one suggested above would be broadened to meet different cases. A landlord owning three sites adjacent to one another would, when circumstances permitted, rebuild to the larger scale, care being taken to observe the height of the main cornice settled by the authorities and to complement the main lines of the adjoining buildings. Notwithstanding the desirability for control and co-ordination in this important question of street design, there are instances, particularly in London, where the individual interests are too opposed to be subjected to correlation. High Holborn and Oxford-street are cases in point. New Oxford-street was designed by Pennethorne into architectural blocks, and is happily outside the controversy.

London does not suffer from a poverty of interest; the chief fault is the ancient City is over-dressed. There is such a variety of picturesque attributes all clamouring at once for notice; such a plethora of advertisements, as well as a variety of coloured building materials to confuse and detract from the dignity a capital city should exhibit. We do not wish to see London a cheap imitation of Paris, but if our authorities could only be brought together to check bad taste and illiteracy in architectural design the beneficial effect on the community would be an advantage.

It is interesting to learn that the Irish Institute of Architects convened a meeting directly the rebellion was under control to go into the question of rebuilding Sackville-street, Dublin. A resolution was passed against the piecemeal reconstruction of the thoroughfare, and demands were made regarding a general scheme. There was only one dissentient in favour of each architect designing in his own sweet way. It is known that the Post Office can be restored, and this is the only building of value in the street. It is also well within the scope of the reconstruction to remove Nelson's Pillar to a new site at the head of the street, and not leave it in its present position, where it cuts off the north side of the city. There are many difficulties in the way of our Irish friends: cost, co-operation of the architects, party walls and boundaries, resentments and jealousies; but there is still a chance that something monumental can be achieved and the reputation of the famous street enhanced by reason of its new architecture. The future will witness a complete change of opinion regarding the *laissez faire* of civic bodies to the architectural amenities of cities. No longer will it be sufficient for City Fathers to boast of extravagant lighting, drainage, and tramway schemes if the conventional scenery of the city is left to take care of itself. Compared with the architectural triumphs of other lands England is sadly deficient, and, save for the glories of the past which adorn the metropolis, London itself is provincial to the core.

We do not intend to close this article in the key of a Jeremiad, for much good work has been done and is being done to rectify past errors. There remains, however, an urgent need for closer surveillance over the treatment of street façades and the restoration of conditions which will make it possible to once more follow the example of the great architects of the eighteenth century.

NOTES.

Charing Cross Bridge.

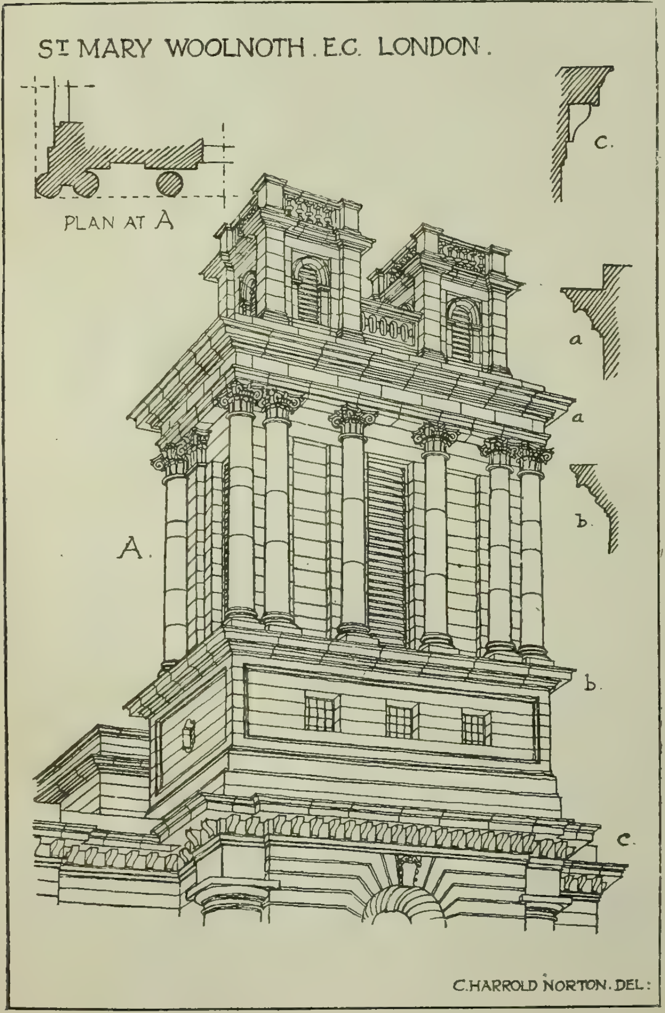
We are very glad that the South-Eastern Railway Company's Bill with respect to Charing Cross Bridge is meeting with such determined opposition, and are pleased that Sir Aston Webb has been able to give so much time and energy to the matter. The fact that he has done so should encourage the opponents of the measure, for Sir Aston wisely does not devote time to championing forlorn hopes, and thus giving the public an excuse for representing architects as unpractical visionaries. The proposals of the company are the outcome of the Philistine attitude adopted by many of the railways and other great corporations in this country, and have been brought forward at a most inopportune time when the country is engaged in the throes of a great war. If the South-Eastern Railway Company would show a little more energy in remodelling their train services and increasing their traffic facilities the public would have reason for gratitude. As it is, the want of better train services puts a barrier in the way of the development of one of the most beautiful counties in England, while for years their freights have been a bar to the increase of trade. They have five stations in London—Holborn Viaduct, Ludgate-hill, Cannon-street, London Bridge, and Charing Cross—which can hardly be considered a necessity, since other companies manage very well with one terminus. The proposal to remove Charing Cross to the southern side of the river and to make a great monumental footbridge to commemorate the present war is a proposal which wants full and impartial consideration after the war, and is not an unimportant side issue which ought to be pushed through when Parliament cannot give fitting and ample investigation to the subject.

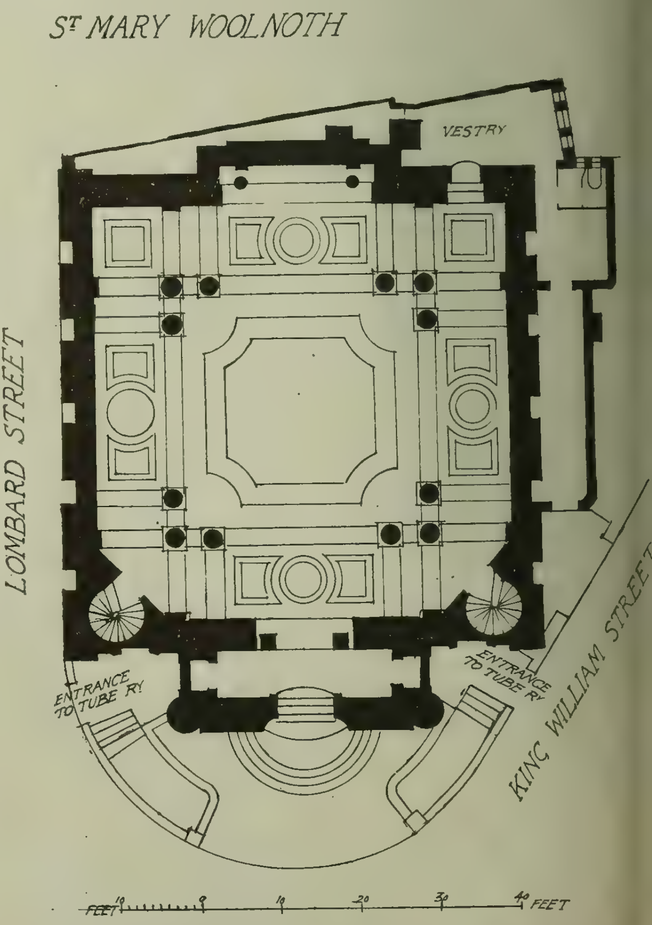
Transport Facilities.

We have received a letter from Mr. Arthur Collins, M.Inst.C.E. and Past-President of the Institution of Municipal and County Engineers, in which he again draws attention to the necessity of reforming our railway transport system. He sees "nothing excellent" in our freight rates being the highest in the world and in the fact that a railway-wagon is only used on the track for 3 per cent. of its time, which naturally justifies the assumption that more railway-wagons are bought and paid for than are actually required. He also sa
that in the United States, while prices average higher, the cost of
railway-wagon unit for unit is lower than that which obtains her
The reason of this is that our wagons must comply with the requir
ments of the Board of Trade, while the Pullman wagons are und
no such obligation. We agree with him that it is unwise to pla
unlimited reliance on any Government department and that t
data which he quotes should be investigated and examined.
is clearly important to the welfare of our trades and industries th
they should have all the advantage of cheap internal transportati
rates, and it is equally evident that there is no *primâ facie* reas
why our traders should not have it. It is true that private own
in the past have been allowed to hold railway companies up
ransom when they constructed their lines, and that rati
authorities use them in many cases unfairly. But, apart from the
items and the undoubtedly stringent provisions of the Board
Trade in respect to public safety, we know of no reasons why o
freight rates should be maintained at their present level.

Lead-Poisoning.

We have received a letter enclosing extracts fro
papers in the Midlands dealing with the dange
attending the use of lead paints and the advanta
of using zinc substitutes. It is said that leadle
paints are making great headway in the Birmingham district. Arc
tects, it is suggested, ought to help in the matter, which it is urg
is one of greater moment than the incompleted statistics we are ab
to obtain would lead us to believe. We feel that the questi
is primarily one for the authorities and for painters themselve
and that as far as architects are concerned it is still necessary
show that there are substitutes for lead paints which are equal
good, and this has not been entirely demonstrated at present.
know that good substitutes exist, but few architects are convince
that lead can be entirely dispensed with. We know also that
reasonable precautions are taken and cleanliness insisted on the
is little danger to health; and the question arises whether we shou
treat the painter as a naughty child or give him proper warni
of the dangers which may attend his calling. Most of the dang
arises from the dry rubbing down of old painted work, which c
be dispensed with or only permitted if the painter wears a respirato
the remaining dangers are obviated by ordinary care and cleanlines
which are within the control of the individual.





(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

E LONDON CHURCHES F WREN AND LATER RCHITECTS OF THE ENAISSANCE.

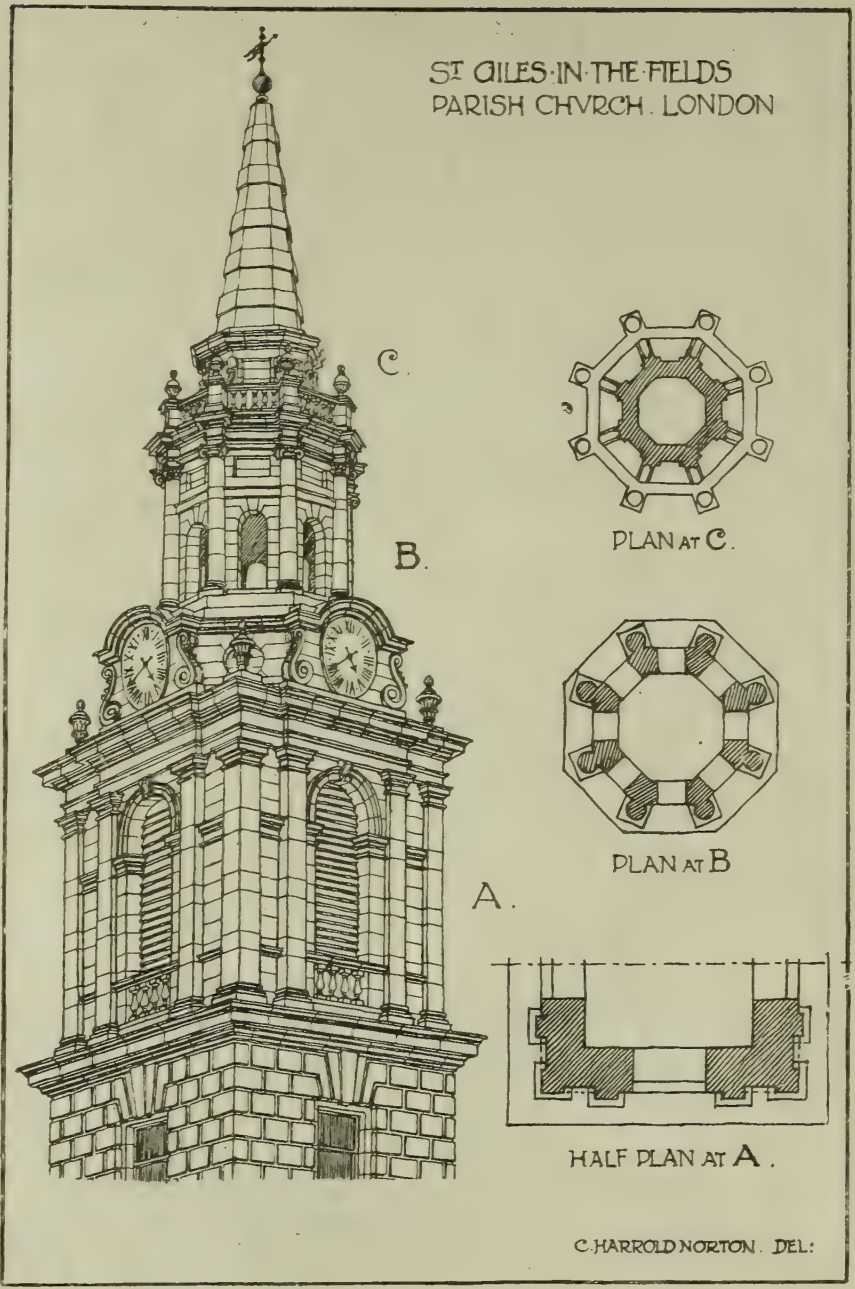
No. XXXVII.—St. Giles-in-the-Fields.

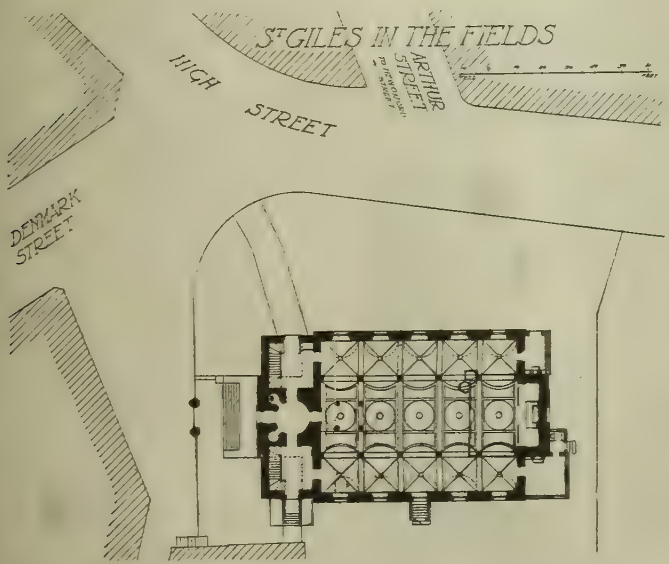
E church of St. Giles-in-the-Fields was d on the site of two former structures. parish undertook in consideration of a of £8,000 towards the cost of a new h to pay the stipend of the rector of the parish of St. George, Bloomsbury-square. Flitcroft, the architect, contracted with rustees to pull down the old church and mplete a new one according to plans and lel for the sum of £7,030; the old materials, ting monuments, were to belong to him, he church was to be completed on or December 25, 1733. The church lly cost £10,026. Flitcroft also designed hurch of St. Olave, Tooley-street. He he son of the gardener to King William at ton Court, and was apprenticed to a and became a member of the Joiners' any, by whom he was fined in 1747 for ndertaking the duties of renter warden on n to that office. Like other men of his e filled a variety of posts, finally becoming troller of his Majesty's Works in England, ich office he was succeeded by William bers.

Giles-in-the-Fields is well and simply ed on very similar lines to St. Martin-in-elds. which it strongly resembles, and ns a marked contrast to the more heavy onumental type of subsequent churches, ich the influence of Vanbrugh is more ly marked than that of Wren.

No. XXXVIII.—St. Mary Woolnoth.

church of St. Mary Woolnoth is the of Nicholas Hawksmoor, whose training gained under Wren, by whom he was yed at the age of eighteen as "the tic clerk." He was afterwards deputy vor at Chelsea Hospital and clerk of orks at Greenwich Hospital and also Kensington Palace. Under Sir John ugh he was employed as assistant vor of Blenheim between 1705–15. ary Woolnoth was built between 1720–30 e united parishes of St. Mary Woolnoth St. Mary Woolchurch, Lombard-street. so built the churches of St. George-in-the- in 1716–19, St. George, Bloomsbury-e, 1723–29, and Christ Church, Spital- His work, of which St. Mary Woolnoth ood example, shows that he was far more nced by Vanbrugh than by Wren, and is er study in the effective use of rustication he omission of columnar architecture.





(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

A curious feature of the church is the treatment of the centre of the western front, which suggests the merging of two western towers in one composition. The church, though only equal in size to one of Wren's smaller churches, is treated far more monumentally and with a disregard of cost, which is in marked contrast to the economy practised by Wren. The monumental element had at this date influenced English designers, whose planning began to show an indifference to the practical considerations which were so evident at an earlier date. The arrangement and design of the niches on the north wall are most ingenious and effective, but the church is, in spite of its architectural qualities, a somewhat gloomy and forbidding structure. Hawksmoor is described as being a skilful mathematician, geographer, and geometrician.

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RAEMAEKERS' RED CROSS GIFT.

It is stated that Lord Furness has purchased outright by private treaty the full set of the first proofs of Mr. Louis Raemaekers' war cartoons, which remain on exhibition at the Fine Art Society's Galleries in New Bond-street until June 10. The proceeds of the sale will be divided between the Red Cross in France and in England.

SILICA AND FIRECLAY MATERIALS.

A paper was recently read by Mr. John West, M.Inst.C.E., M.I.Mech.E., of Manchester, before the Manchester District Institution of Gas Engineers (President, Mr. Edward A. Harman, M.Inst.C.E., Huddersfield), on "Silica and Fireclay Materials," giving practical examples of their expansion, contraction, and refractory qualities. In the course of his paper the author said:—

"I have been invited by your President and Council to read a paper before this Institution upon the important question of the refractory materials and the behaviour under heat of fire-resisting materials used in retort settings in gasworks. It is a study which has always had an intense interest for me throughout my long connection with the gas industry, and it is one which all gas engineers should more than ever to-day place to the forefront—more than ever because the costs of maintenance and renewal are anything but negligible quantities in the economy which is so essential in these days of higher costs in all directions and of stern competition. The profit and loss account of all gas undertakings is—I am speaking of normal times and not of the prevailing war conditions—mainly dependent upon the successful results obtained with the carbonising plant, the successful operation of which is absolutely contingent on the behaviour of the fire-resisting materials employed in its construction. Hence the paramount importance of a full and practical knowledge of these materials.

My training as a gas engineer emphasised the imperative necessity of obtaining the very best fire-goods for retort settings. While in charge of the Maidstone gas undertaking I erected, for experimental purposes, a small working plant, and, inasmuch as it was necessary to let the retort down rather more frequently than is customary in ordinary practice, it was requisite that the very best retorts obtainable should be used. After consultation with a retort-maker (whose instructions were to produce, regardless of cost, the best retort he could manufacture) an excellent article was made. The retorts were costly, but in comparison with others of inferior materials they were in the long run the cheapest. This is an indication that excellent retorts could be realised at least forty years ago.

After being appointed Chief Engineer to the Manchester Corporation gas undertaking—this is looking backwards many years—one of my first duties was to arrange for the building and resetting of retort settings for the then ensuing winter. The retort and the fire-goods for this purpose had already been delivered. Upon inspection of the retorts they were found to be very defective and insufficiently burnt, and deserved to be rejected. They had, however, been paid for, and there was not sufficient time in which to obtain new ones. So, reluctantly, they had to be used.

The purchasing methods employed by the Gas Committee of advertising and inviting tenders for so many thousand feet run of retort, without any definite stipulations as to the quality of the materials they were buying, appear very extraordinary and very wrong; but they were not the only corporation or company who were following this bad system of purchasing retorts and other fire materials. You will, I am sure, agree with me that such a practice could only be conducive to inferior and low-priced material being tendered for, and it was certainly no encouragement to good firms to manufacture the best possible material. I found that under these loose advertising conditions, with quality not being properly taken into consideration, many firms would not quote for their best goods.

However, reverting to the defective retorts which had been delivered, I reported the matter to the Gas Committee, pointing out the loss that would be sustained by using such bad-quality material, also that, instead of haggling over a 1d. per foot extra for retorts, an additional 1s. per foot was not a large matter if the full value was put into the retorts; further, that the cost for labour was about the same for setting a good retort as a bad one, and, moreover, that there was a great loss of gas, owing to the contraction of the inferior retorts and their exceptionally short life.

At the same time I recommended that the old and pernicious system of inviting tenders should be dispensed with, and, as an experiment, that the Committee should invite tenders from four well-known firms of good repute, each for ten settings of through retorts of the best quality, with the view of testing the materials under the same conditions and to encourage the makers to do their very best as to quality. The makers were told that future orders would depend upon the result of these tests. Naturally, we had to pay more than formerly for the better retorts, but the working results were very satisfactory indeed. The retorts lasted fully double the time that the former inferior and low-priced retorts had done, and the annual saving, as the result of decreased maintenance charges, was very considerable.

The advent of gaseous firing enabled us to obtain higher heats in retort settings. Consequently, retorts and bricks of greater fire-resisting quality were required to obtain, without destroying the settings, the full advantages of the higher temperatures employed, and greater use was therefore made of silica fire-goods on account of their higher refractoriness, especially in the combustion portion of the settings and around the underside of the retorts.

About twenty-five years ago I commenced to turn my attention particularly to the manufacture of silica bricks, and was instrumental in establishing a brickworks for the purpose in Derbyshire. During this period many and varied experiments have been made with a view to obtaining a reliable silica firebrick. The experience has been extremely interesting, the subject, though surrounded by many difficulties, being an absorbing one. The difficulties as time proceeded have, I venture to submit, been successfully overcome.

As you are no doubt aware, most silica bricks expand, while ordinary fire-goods contract, very materially when subjected to
high temperatures; and you will appre
that both these features are very objection
A long time ago I came to the conclusion
all fire-goods should be made as far as pos
so that expansion and contraction should
the minimum; and I also believed tha
careful and steady experimenting with va
mixtures this much-desired result coul
achieved. As you, of course, know,
goods are difficult to manufacture, owin
the very small percentage of binding mat
permissible in their composition.

[*Photo: Geo. Trotman.*

St. Mary Woolnoth, E.C. (*See page* 415.)

Most of the silica obtained from the pi
which I am interested in Derbyshire is pr
by analysis to be very pure. It con
about 96 per cent. of silica, so that there
very good margin for the manufactur
highly refractory bricks. After many ex
ments, we succeeded in making an exc
and highly refractory brick which in the ex
mental furnace did not show any sig
expanding or contracting. Samples of
bricks were sent for testing to Dr. Mellor
he stated that the material neither expa
nor contracted at cone No. 12, 1,350 de
(2,462 deg. Fahr.). These non-expanding
bricks have for many years past been us
me in horizontal settings, particularly in
positions exposed to the greatest heat, wit
results that combustion chambers have p
cally retained their original shape under
temperatures and retorts have remained

The importance of these features, espe
with retorts operated by stoking machi
will be appreciated.

The question of the expansion and contra
of refractory materials is a very serious
important one; and it is only by great
and frequent observation that a decision c
arrived at as to the actual behaviour und
working conditions, more particularly in re
of the load on the material at high tempera
To make a suitable selection of materia
use in the various forms of retort settin
therefore a difficult problem, partic
in these days of high temperatures,
there is a combination of silica and ord
fireclay goods in a setting, the silica hav
tendency to expand and the fireclay a ten
to contract—two distinct variations tro
some to deal with.

Much has been said and written abou
alleged superiority of German-made r
and other fire materials, and a few words
not be out of place here on the subject.
is no doubt that the Germans have mad
in the case of many of their other indus
a special study of firebrick production
retort-bench construction, and in this they
been assisted very much by German gas
neers and scientists. Cost, too, has not
regarded, for in that country the maker
higher prices, *pro rata*, for their goods th
obtainable in England. It is acknowl
by all who have studied the matter that
is as good material in Great Britain as th
in Germany, and that it is only a questi
bringing scientific and practical exper
into the manufacture to produce finished
which will compare more than favourably
those of German make. With every confi
I say that British manufacturers will ri
the occasion and maintain their position.

With the kind of material made in Ger
I have some personal knowledge. Mr. Irmi
the Chief Gas Engineer of the Copenh
Municipality, some years ago made
exhaustive experiments in his combu
chamber arches with the best German mat
against the Derbyshire silica bricks.
the German materials gave way, the Derby
materials kept their original form, and
became glazed on the outer surface. I
municated with Mr. Irminger recently on
subject, and he replied as follows:—"Atte
may be called to the arches in the combu
chambers of our setting being of silica b
and bricks throughout, and this prevents
retorts which are supported by them
sinking, as the silica material expands
little. Arches of ordinary clay bricks of
best German materials have been foun
sink more than 6 in., the bricks, in my opi
not being burnt at a sufficiently high tem
ture, and contraction subsequently takes p
Since we commenced many years ago the
of the Derbyshire silica firebricks in our ar

the highest temperature prevails, we ıever found any sinking of the 20-ft. long supported by the silica arches—the on being equal to or more than the (say, about 1,500 days), while with est German materials the duration was some hundred days, on account of the of the retorts, which prevented the use king machines."

Irminger also said that he thinks it sible to obtain reliable tests with fire- after only a few hours' trial in a laboratory ordinary atmosphere, and that it is a on of time, together with the chemical at high temperature by different gases. these factors can only be realised in working over a year or more. He on to say: "I have experimented very by placing bricks in the combustion er from 200 to 300 days; and when the are cooled down to make a thorough nation of them. The best proof is I have some of the best German clay retorts o very well for some months, but they ards commence to shrink. Therefore me proof is necessary." I quite endorse rminger's views, and know of other ers who are of the same opinion."

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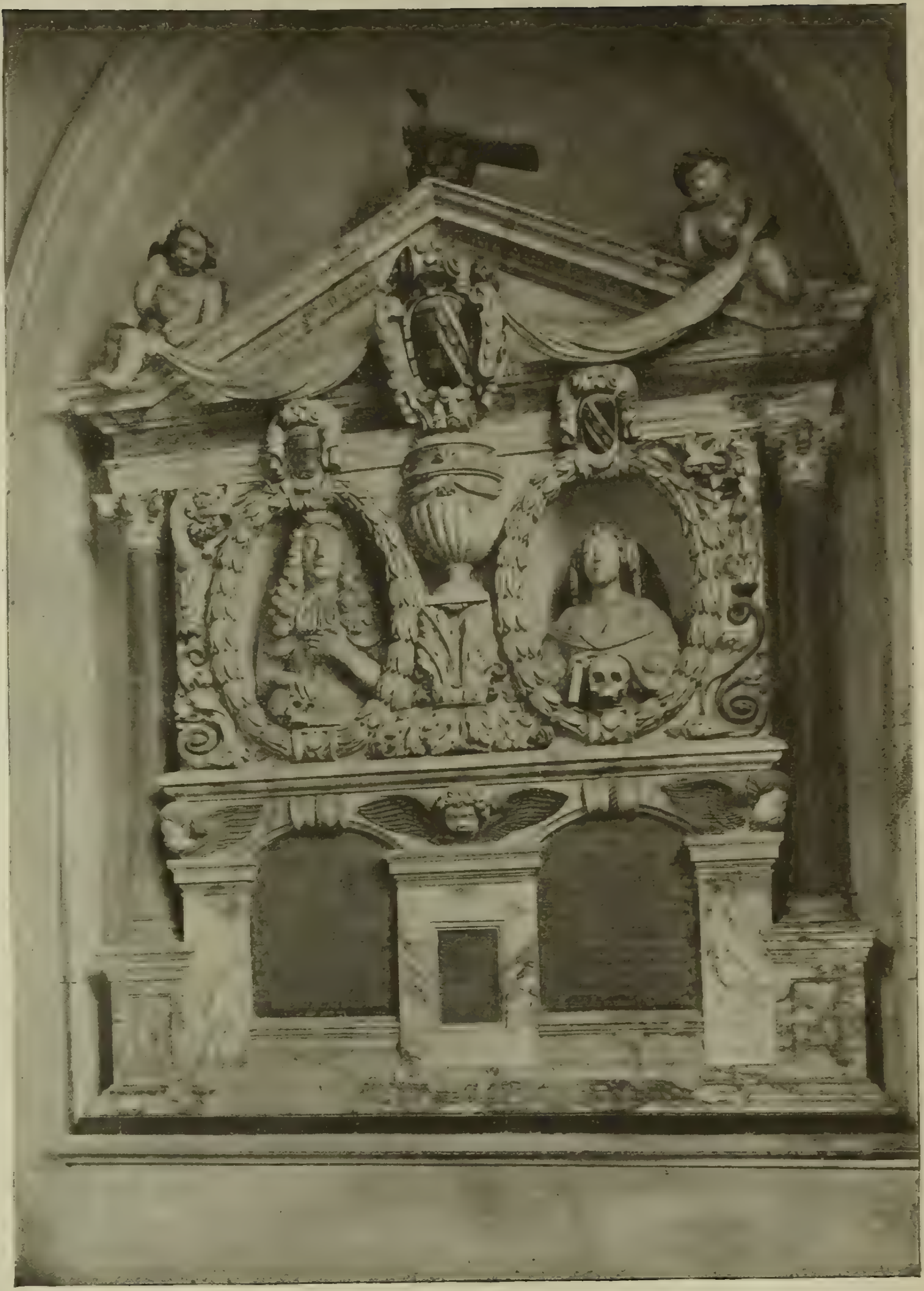
BOOKS.

h Mural Monuments and Tombstones. ndon: B. T. Batsford, Ltd. 12s. 6d.)

admirable little book contains a selection ghty-four photographic illustrations of ablets, table tombs, and headstones of venteenth and eighteenth centuries. The ts have been specially selected by Mr. rt Batsford, and Mr. Walter H. Godfrey, , has written the introduction. No more tune and useful work could have been ced at the present time, for the examples ed show that our forefathers excelled in itable commemoration of the dead more edly than they did in the provision of modation for the living. More than while a knowledge of the architecture st ages helps us in designing now, but t be adopted without many modifications, mural tablets of the seventeenth and enth centuries are in most cases directly able to modern wants, and are therefore eater value to our craftsmen. As a quence of war we shall have many ments to erect, but because of the of the times they must be treated in the simple and inexpensive manner, and in the of the seventeenth and eighteenth centuries conditions were usually paramount. Old ptions give us a lesson in brevity and ssiveness, and, while the sentiment of y would render them in many cases ropriate, they may yet be regarded odels, and the lettering used cannot mproved upon. How simple a mural ment may be made is shown in No. 17 St. Mary the Virgin, Oxford, and No. 18 St. Mary the Great, Cambridge, while . 24, which we illustrate, we have a note eater elaboration, which is a most pleasing ple of freer Renaissance design. This should be in the hands of every craft er in marble and stone, while it should a secondary object in calling the attention e public in every locality to the rich ures of design to be found in many old hes in every part of the country. The mental mason of to-day may be said to added a new terror to death, while our stors understood its pathos and beauty, made the world of the living richer by knowledge. We may indeed say with her meaning, *Sos monumentum requiras mspice,* for this little book will teach y what to look for. It is almost superfluous y it is excellently produced.

Construction of the Panama Canal. By ILLIAM L. SIBERT, Brigadier-General U.S.A., ivisional Engineer, Panama Canal, 1907-14, d JOHN F. STEVENS, Chief Engineer, 1905-7. ondon and New York: D. Appleton & Co. . 6d.)

useful and well-written book contains a account of the greatest engineering work he age, an account in which technicalities are avoided, but which is sufficiently detailed to be of use to engineers. The American Government in undertaking the work were fortunately aware of the immense difficulties of the project, and therefore avoided the mistakes which led to the abandonment of the French canal and proved the Waterloo of M. de Lesseps, who hoped to add to the renown he had gained at Suez by the accomplishment of a work as important for America as the Suez Canal has been for the Old World. The magnitude of the work already carried out can be estimated when we remember that the completed portions utilised and the plant provided for it which were incorporated in the American scheme are estimated to cost nearly £2,000,000. The authors of the book state with pride that the American canal was carried out at the estimated cost and in the stipulated time, and it affords an admirable object-lesson of what can be done by well-directed national administration and organisation. Among other wise decisions made was that of bearing in mind the true meaning of *festina lente,* for the canal work proper was not undertaken before the Government had had full and exhaustive reports on the relative merits of the rival schemes of a sea-level canal and one with locks. They also made every arrangement for successfully combating disease common to the conditions of an admittedly unhealthy region, with such success that all danger from yellow fever—that curse of the tropics—was eliminated. Every preparation was made for the housing and well-being of the workers, so that what might have been a perilous and dangerous task became a standing lesson of the way in which sanitary problems can be dealt with. The success of the enormous undertaking was due to the joint work of many eminent men, but it is probable that Major George W. Goethals, who was the chief engineer and executive officer of the commission during the entire period, will be most prominently associated with its success. The book contains well-written chapters dealing with each section of the work, which space does not permit our commenting on, but the summing up in favour of the method under which the canal was constructed, by national agency instead of ordinary contracts, deserves full consideration, since it goes to prove that the greatest of works can be economically undertaken by a Government if it employs the right men. The lesson of the Panama Canal for us is that a Government should avail itself of the most competent advice, for in this way alone can the interests of true economy be promoted.



Mural Tablet, Stanton Harcourt, Oxfordshire.
(From "English Mural Monuments and Tombstones.")

GENERAL NEWS.

The War Fair.

The War Fair in aid of the funds of the Wounded Allies' Relief Committee has been opened in the Caledonian Market.

Exhibition of Home Industries.

The annual exhibition of the Home Arts and Industries Association was opened on Wednesday last week at the Hon. Mrs. Newdegate's house, 36, Grosvenor-place.

"Drake" as a Pageant.

Mr. Louis N. Parker's play, "Drake," is to be played in the open air at York (where Mr. Parker produced a notable pageant in 1909) in aid of the two V.A.D. hospitals there. The Yorkshire Philosophical Society has lent the Museum Gardens for the production, and should the weather be bad the performances will take place in the Theatre Royal. They will take place on Wednesday, Thursday, and Friday, July 26, 27, and 28, and there will be a preliminary performance, attended by convalescent soldiers.

The Surveyors' Institution: Military Service.

The large number of men possessing surveying and constructional qualifications, who are now being called up for military service, makes it impracticable for the authorities in all cases to take advantage of their professional experience by allocating them to the technical branches of the Army. It may therefore be of interest to some to hear that the Secretary of the Institution is in a position to say that Lieutenant-Colonel Cranfield, commanding 3/7th D.C.O. (Middlesex Regiment), is prepared to give members of the Institution or their assistants an opportunity of enlisting in that battalion and, as far as possible, to allow them to serve together in the same platoon. Intending recruits should communicate direct to the headquarters of the battalion at Solefields Camp, Sevenoaks.

Town Planning Institute.

The annual general meeting of the Town Planning Institute was held recently at the Institution of Municipal and County Engineers, Victoria-street, Westminster. Mr. Raymond Unwin (President) occupied the chair. The following members of Council were unanimously reappointed:—

Architects.—Messrs. S. D. Adshead, P. B. Houfton, H. V. Lanchester, A. S. Soutar, P. T. Runton, R. Unwin (President).

Engineers.—Messrs. J. A. Brodie, J. W. Cockrill (Senior Vice-President), W. T. Lancashire, H. E. Stilgoe, J. A. Webb (Associate Member), E. Willis (Associate Member).

Surveyors.—Messrs. T. Adams, W. R. Davidge, T. H. Mawson, G. L. Pepler, G. N. Dixon (Associate Member).

Legal Members.—Messrs. E. R. Abbott (Vice-President), J. T. Birkett, R. A. Reay-Nadin.

Legal Associate Member.—Mr. C. P. Lovelock.

Hon. Member.—Mr. W. R. Jeffreys.

Associate Member.—Sir R. A. Paget, Bart.

Ex-Officio Member.—Mr. P. Abercrombie (Hon. Librarian).

The name of Mr. Chalton Hubbard was added to the list of legal members on the Council. Following the annual general meeting, the adjourned discussion on the papers by Mr. H. R. Aldridge and Mr. H. Shawcross on "The Town Planning Proposals of the Urban Land Report" was taken. Mr. Aldridge, in his paper, suggested that town planning should be made obligatory.—Mr. Cockrill maintained that obligatory town planning was necessary, as hardly a day passed in a town that was developing, or even in a place that was not developing, but what the Town Planning Act would prevent things being done that would be a blot for all time.—Mr. Stilgoe pointed out that it was easy to say that the general law could be amended in certain respects and the same results obtained, but if the local authorities had to wait for that there would be no progress. We were advancing very rapidly, and most people thought that immediately the war was over there would be needed a larger number of small houses suitable for the working classes.

Technical College for Middlesbrough.

Mr. Joseph Constantine, a Middlesbrough shipowner, has given £40,000 towards a scheme for the establishment of a technical college in the town, and other local firms have promised £15,000.

Italian Artists and the War.

An exhibition of pictures dealing with the war by Italian artists will be held shortly after Whitsuntide at the Leicester Galleries, Leicester-square. The leading artists of Italy are contributing to it, and the exhibition will have an official character by the inclusion of a large collection of paintings of the war on the Italian front by the artist, Ludovica Pogliahi, who has been authorised by the Italian Government to execute the series. Signor Pogliaghi is well known to visitors to Milan as the designer of the bronze doors of the Cathedral.

The Rebuilding of Dublin.

The following letter by Mr. Ernest Newton, President of the Royal Institute of British Architects, appeared in the *Times* of Wednesday: "Sir,—It is to be hoped, notwithstanding the difficulties and distractions of the times, that the rebuilding of the Sackville-street district will be carefully considered. There is always a temptation to go along the line of least resistance and to rebuild a destroyed area in the quickest possible way in order to rehouse the inhabitants; but if careful thought and a little time are given to the problem now the result should be an ordered and considered scheme worthy of the City of Dublin and its fine architectural traditions."

In the House of Commons on Thursday last week Mr. Asquith, asked by Mr. R. M'Neill whether, with a view to the prevention of vested interests being created which would interfere with the rebuilding of Sackville-street, Dublin, as part of an architectural and town-planning scheme worthy of the position and natural features of the thoroughfare, the Government would take immediate steps to acquire the whole area in order to be in a position to control the rebuilding, replied:—The Home Secretary is proceeding to Dublin to discuss this with other questions. I can make no statement until after his return. Mr. MacCallum Scott: Is the right hon. gentleman aware that the worst of all architectural effects are produced under Government controlled schemes? Mr. Asquith: That is a matter of opinion and experience.

Major Phillips Fletcher.

Major H. Phillips Fletcher, F.R.I.B.A., F.S.I. (partner in the firm of Messrs. Banister, Fletcher, & Sons), of the Middlesex Hussars, has returned to England on being gazetted to the Royal Flying Corps. The Major had been attached to the French Navy as Commandant of the British Military Observers who were flying with French pilots in the East. He was awarded the Croix de Guerre in August last for reconnaissances under fire for the first time, and before leaving the French Squadron received it again on two further occasions, once more for work with the Navy and once with the French Army. This entitles him to wear palm leaves and two stars on the riband of the order. He is the only British officer thus decorated.

British Memorial of the Centenary of Argentina's Independence.

It is announced that Sir Reginald Tower, his Majesty's Minister, has formally presented to the President of the Argentine Republic the clock tower which has been erected in the Plaz Britanica at Buenos Aires. The foundation-stone was laid by Sir Walter Townley, then British Minister to the Argentine, on November 26, 1910. The tower was designed by Mr. Ambrose Poynter, son of Sir Edward Poynter, President of the Royal Academy. The contract for its erection was given to Messrs. Hopkins & Gardom, who have carried out the work under the supervision of Mr. M'Carthy, clerk of works. The height from the ground to the three-masted ship which serves as a weather-vane is 200 ft. The tower is square in form and supports an octagonal drum and cupola, the latter covered with copper and surmounted by a vane. An electric lift is fitted in the interior. On the ground floor is a hall or waiting-room.

Cardiff Hospital.

Sir Edward Nicholl has given £10,000 to King Edward VII. Hospital at Cardiff. sum is to be devoted to the erection of a wing, and is given on the occasion of the ho of knighthood conferred by the King.

The Architectural Association of Irelan Dublin.

The following resolution was passed meeting of the Committee held on the 31st ult "In view of the large amount of impen architectural work in Dublin, the Commi of the Architectural Association of Ire desire to call the attention of architect practice and assistants to the register whi kept at the Association offices. This regi under the present abnormal conditions, have decided to throw open free of ch Every effort will be made to assist practi architects and assistants at the pre juncture." Applications should be addre to the Hon. Secretaries, the Architect Association of Ireland, 15, South Frede lane, Dublin.

Architects and Military Service.

We are informed that the 20th Lon Regiment (T) has vacancies for some 500 If sufficient architects joined this regimen "Architects' Company" would be formed they would be kept together during trai The regiment has two battalions in Fra and a third battalion is being formed for purpose of supplying drafts to the first second battalions. Intending recruits sh apply to Major Dodd, Holly Hedge Ho Blackheath. (Telephone: Lee Green Lieutenant-Colonel S. W. Cranfield (A.R.I.B commanding the 3/7th D.C.O. (Middl Regiment), states that he is prepared to fifty or sixty architect recruits in his batta They must be medically fit for service abr Intending recruits should write to H quarters, 3/7th D.C.O. (Middlesex Regim Solefields Camp, Sevenoaks, and they receive a free railway warrant.

Excavations at Dunfermline Abbey.

With the authority of the Crown, Mr. Macgregor Chalmers, architect, Glasgow conducting search-work in the nave of fermline Abbey Church. The object of operations is understood to be to ascer the nature and extent of St. Margaret's Cha which existed prior to the nave, and may been used for worship while the heavy mas walls and pillars of the old part of the ch were being built in the twelfth century. presumed from the trenches which have dug that the chapel had occupied a site wi the interior lines of the two rows of pil with its apex at the landing at the centre entering the new church. The odd fragm of standing masonry which have been laid point to the existence of a structure of s kind there at a very remote date, and *débris* suggests that the present floor of nave had been used as a place of sepultur *Glasgow Herald.*

The President of the Surveyors' Instituti

Mr. George Francis Stewart, the recen elected President of the Surveyors' Institut was born in 1851. He was educated Marlborough College and Trinity Coll Dublin, where he graduated Senior Moder and Gold Medallist in 1872. He then ent his father's office, and in 1878, on the deat the Earl of Leitrim, went down to the Cou Leitrim in charge of the extensive Clem Estates in that county. Since 1879 he been a magistrate and grand juror, and si 1900 Deputy Lieutenant of the County Leitrim, in which he has a large numbe agencies. He served as High Sheriff in 1 and for many years has represented the cou on the Central Executive of the Landlo Convention. In 1885 Mr. Stewart becam partner in the firm of Messrs. J. R. Stewar Sons, Dublin. Of recent years he has been gaged in many important arbitration cases, has negotiated a large number of sales un the various Irish Land Acts. He is a mem of the Senate of Dublin University (Tri College), and in 1902 he was elected a dire of the Bank of Ireland, of which he has b Governor for the last two years.

Leading Contents.

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ILLUSTRATIONS.

The City Companies: Goldsmiths' Hall.

WE are not able at present to illustrate Fishmongers' Hall, which is now being utilised for purposes in connection with the war, but hope to so subsequently; but we give illustrations of e Goldsmiths' Hall, Philip Hardwick's fine ilding, which is one of the best examples of glish architecture of its date.

City Improvement Scheme, Oporto.

WE illustrate two views made by Mr. Raffles vison of the very fine improvement scheme ich Mr. Barry Parker has designed for the y of Oporto. The area has already been ared, and the scheme will be proceeded with rtly in its entirety. In Portugal the owner allowed to fix the rateable value of his own operty, but this rateable value fixes the ount of compensation to be paid to building ners when public bodies wish to carry out provement schemes, and there can be no spute or delay in carrying out schemes owing the demands of private owners. We have eady commented on this very fine project— nost, if not quite, the best scheme of the kind have ever seen—in our article on "Architec-re at the Royal Academy" (May 5).

CORRESPONDENCE.

The Commercial Value of Design.

SIR,—Whilst in general sympathy with the ews expressed by Mr. Hamilton T. Smith this subject, there is something to be said the manufacturer's point of view.

There are manufacturers in this country o would be quite ready to collaborate with signers, in a whole-hearted way and without nting expense, but for the fact that they ow, sometimes from costly experience, that e venture will probably be unprofitable.

Mr. Hamilton T. Smith mentions the gas e. I know a firm who really did try to get t a set of inoffensive designs, studying oportion, restraint in the use of detail, and ility, but because these designs did not nform to the standard dimensions laid down the gas engineers, who are the buyers in reat Britain, the experiment was a failure. he public do not buy gas fires, they hire em, and the engineers decide what is good ste.

The firm I have in mind would have lost s entire business in this branch of trade ad they not accepted the conditions. The aveller was instructed to obtain from his stomers the standard dimensions, and the works manager then said to his designer, "Here are a series of dots; draw lines through them and make them into designs." This manager resented the position, but the only alternative was to close his shops.

Although the gas engineer is probably the chief sinner in this country, there are others who also have the power to control taste, such as the ironmonger and speculating builder. As we all know, plain things cost more, and ignorant eyes cannot account for it. The ironmonger and builders' merchant naturally aim at stocking goods they can sell easily, and the builder does not want any convincing that the more showy, cheaper article is the best from every point of view.

My remarks do not refer to special work—an architect knows where to get that to his liking, but it is practically impossible to get the cheaper common things nice, neither would there be any monetary reward to the manufacturer if he tried to supply them, simply because the general demand is for the other sort.

Those people who would like to live with quiet plain fittings in their homes are only a proportion of the whole, and have no power to influence the people I have mentioned, whereas the vast majority are perfectly content with "taste" as expressed by the gas engineer, the ironmonger, and the speculating builder.

DESIGNER.

St. Paul's Cathedral.

SIR,—The greatest danger to St. Paul's Cathedral is the enormous weight of the outer dome of timber, lead, and iron, and has caused all the mischief to the piers. As I pointed out some years ago, some of the stone blocks used in constructing the piers were placed on their grain instead of bed. This caused the cracks on account of the enormous pressure of the weight on the base. The iron ties in piers also perished by rust. The outer dome is constructed of great timbers nearly 250 years old. The base is surrounded by a heavy iron cable chain. This outer dome is covered with lead. Dry rot and vermin have attacked the timber and rust the ironwork, exactly as the timber roof of Westminster Hall was perishing from dry rot and insects. As most people are aware, St. Paul's Cathedral is built on Ludgate-hill, whose soil is clay and liable to slide, especially if a heavy pressure is applied such as the enormous weight of the above-mentioned outer dome. The repairs of piers, etc., will, I am afraid, not be permanent unless the enormous weight is removed. If this were done we need not fear for the safety of St. Paul's Cathedral—the masterpiece of the great architect, Sir Christopher Wren. As I said before, unless the dangerous heavy outer dome is reconstructed in a light, strong, fire and weather proof material nothing will save this grand and beautiful building.

HENRY H. B. SANG,
Architecte-Decorateur.

P.S.—I find that the only metals which will agree with plaster or concrete are either copper or aluminium.

Defective Water Supply to Bath.

SIR,—Can you or any of your readers suggest a satisfactory solution of the difficulty caused by the fact that the cold-water supply to my bath runs in a mere trickle? The tap has been in use some thirty years, I believe, and possibly it is lined (or the service-pipe is) with a thick coating of sediment. The only suggestion I have been able to get is to have a new pipe laid to the main, and this means digging up my lawn and making a frightful mess generally, to say nothing of expense.

PUZZLED.

ESTATE OF AN ABERDEEN BUILDER.

The inventory of the heritable and movable estate of the late James Park, builder, 31, Cranford-road, Aberdeen, who died on February 14 last, has been lodged with the Sheriff Clerk and amounts to £18,910 16s. 2d.

ARCHITECTURAL SOCIETIES.

The Royal Institute of the Architects of Ireland.

The Council met on Monday, June 5. The President, Mr. R. Caulfeild Orpen, was in the chair. There were also present:—Messrs. W. Kaye-Parry, Vice-President, H. J. Lundy, J. H. Webb, G. L. O'Connor, W. A. Scott, F. Bachelor, F. G. Hicks, A. E. Murray, C. A. Owen, A. G. C. Millar, L. O'Callaghan, R. M. Butler, G. P. Sheridan, H. Allberry, and Frederick Hayes, Hon. Secretary. In connection with the question of the rebuilding of the late destroyed areas the following resolution was adopted:—

"That the Government should embody in any Bill dealing with the rebuilding—'power to acquire in the Sackville-street area all the sites of the destroyed property, and, where necessary, those of the premises adjoining, and to redistribute these sites, define the boundaries, and control the designs.'"

A letter was received from the Architectural Association of Ireland, expressing its approval and general adherence to the terms of the resolution adopted by the Council, and dealing with the desirability of imposing conditions or restrictions with regard to the design and reconstruction of buildings in important thoroughfares, so that they shall conform to some general scheme of street improvement.

BOOK RECEIVED.

HARPER'S HYDRAULIC TABLES FOR THE FLOW OF WATER. By Joseph H. Harper. (London: Constable & Co., Ltd. 8s. 6d. net.)

FIFTY YEARS AGO.

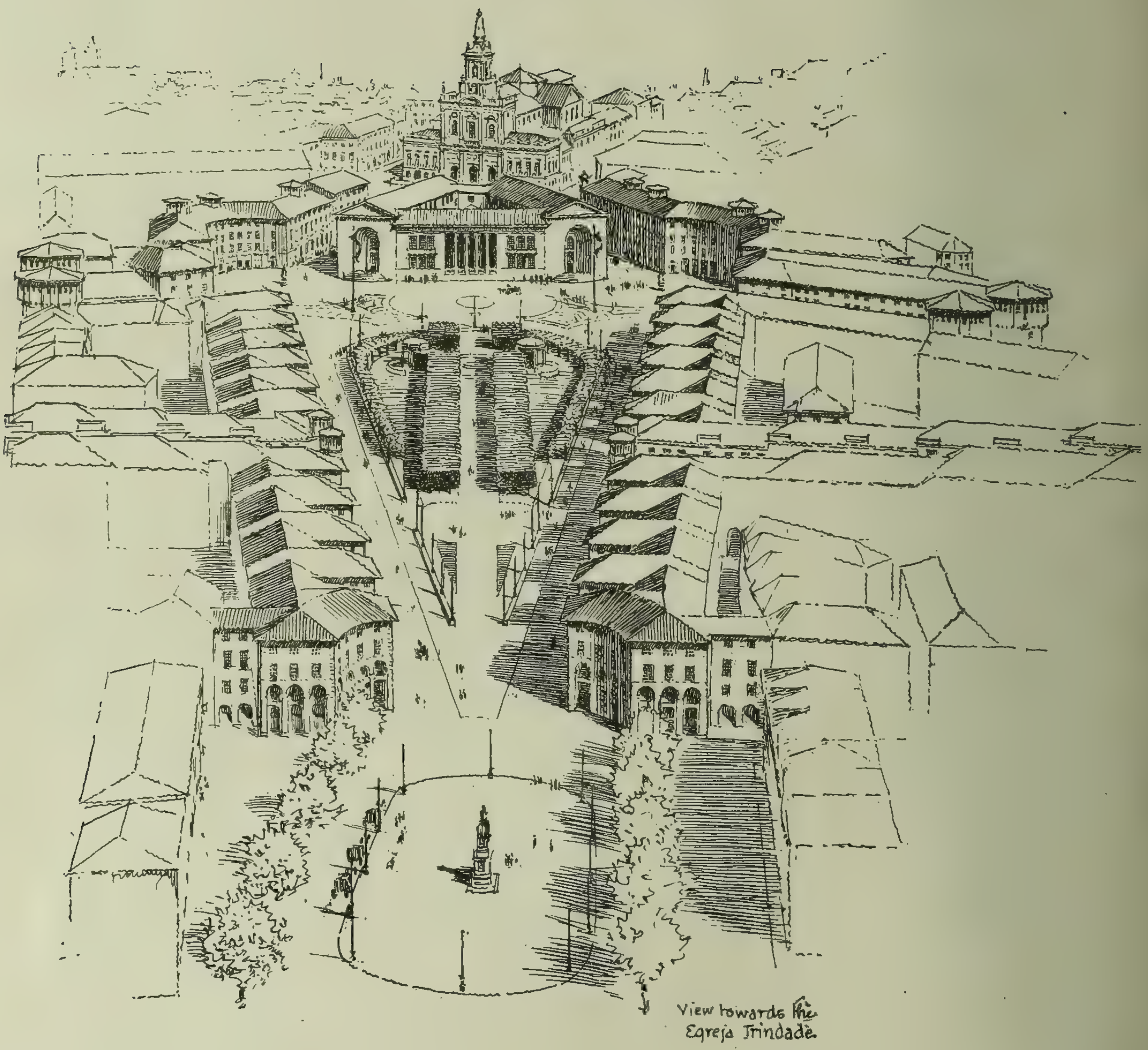
Sanitary State of Chorlton Union.

AT an annual meeting of the local Board of Guardians last week a report was presented from the Medical Committee recently appointed in apprehension of a visitation of cholera, to investigate the sanitary condition of the various townships in the union. Most of these are described as very bad. The reports of the various medical officers of the townships give detailed accounts of them, from one of which, that of Mr. Smith, of the Hulme district, No. 1, we may give a brief passage:—"The most unhealthy parts of the district lay between Russell-street and Cornbrook, City-road, Chester-road, and the lower part of York-street; from this quarter nearly all the cases of typhus had come during the past year; and should the cholera visit us it would locate itself in that region. There were whole streets of back-to-back houses with most imperfect ventilation and drainage. In many places there were closed courts and passages with privies in the most filthy and neglected state, and cellar dwellings of the most unwholesome character and utterly unfit for human habitation. The ashpits and shallow drains emitted a constant stench that was most prejudicial to health. Pools of surface-water and refuse lay about; and the sewage percolated through the walls even into the very dwellings."

[*** From the *Builder* of June 9, 1866.—ED.]

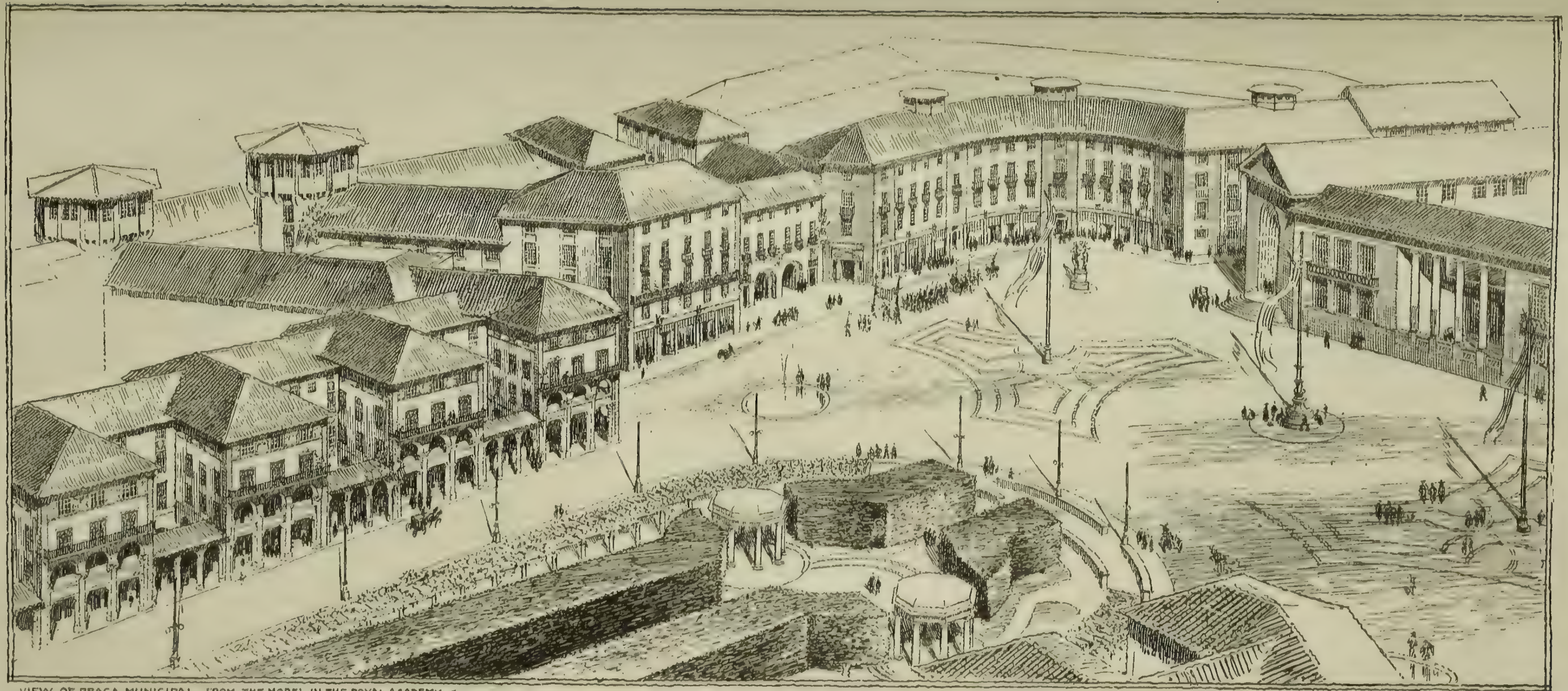
ST. MARY'S CHURCH SPIRE, LEICESTER.

About 40 ft. of the top of the spire of St. Mary's Church, Leicester, has been condemned as unsafe, and it will be necessary either to remove that portion, leaving it flat, or else rebuild it.


View towards the Egreja Trindade.

CIVIC CENTRE FOR THE CITY OF OPORTO

BARRY PARKER F.R.I.B.A. ARCHITECT



VIEW OF PRACA MUNICIPAL FROM THE MODEL IN THE ROYAL ACADEMY

BARRY PARKER F.R.I.B.A. ARCHITECT

CIVIC CENTRE FOR THE CITY OF OPORTO

.. The .. City Companies and Their Halls.*

No. 4.

The Goldsmith Company.

TO GOD ONLY BE ALL GLORY

(Old Arms.) Present Motto: "JUSTITIA VIRTUTUM REGINA."

THE Goldsmith occupied a position of honour and importance throughout the Middle Ages and in the days of the Renaissance. Wealth consisted more than it does to-day in the possession of property of value in plate and jewellery, which was handed down from generation to generation, and could, if necessary, be given as a security to those advancing money. The great Goldsmiths frequently acted as moneylenders and bankers to kings, as numerous historical records show. The Goldsmith and Jeweller have provided a subject of fiction for Scott in the person of George Heriot, King James' goldsmith, and for Dumas, in Bœhmer and Bossange in "The Queen's Necklace," which both fact and fiction have associated with the tragic destinies of Marie Antoinette. The value of the material dealt with dignified the craft, and thus we find the greatest work of many an artist in times of the Renaissance is connected with the working and fashioning of the precious metals, so that it was primarily as a gold-worker that Benvenuto Cellini made his name. The value of plate and jewellery was always dual, arising from the intrinsic value of the metal itself and the added value given by the artistic excellence of the craftsmen, which in the days of Renaissance culture was fully understood and appreciated. In earlier days a gold chain served both as an ornament and a convenient form of portable wealth, an obligation being frequently discharged by cutting a few links from its length. The growth of a more complex civilisation and the use of credit have destroyed the pre-eminence of the Goldsmiths' position, while the decay of craftsmanship and the habit of regarding precious objects as luxuries rather than portable forms of wealth, more valuable than money because of the added value given by artistic excellence, have undermined the importance of the position once occupied by those whose craft was both a necessity and an opening for the most delicate craft of design.

The Goldsmiths' Company occupies the fifth place in order of precedence among the City Companies, and in the year 1180 is mentioned as being one of the adulterine or unauthorised guilds. It was amerced or fined forty-five marks—a large sum in those times—indicating that the guild was of considerable importance. The records state that in the year 1267 or 1268 an armed affray took place in the streets at night between the Goldsmiths and Merchant Taylors, and the combatants were separated by a sheriff's posse, many arrests being made and thirteen of the delinquents executed. In the year 1300 the existence of the Company was recognised in a statute, 28 Edward I., cap. 30. The standards for gold and silver were fixed, and the Wardens of the craft were given powers to assay all articles of these metals, and certain powers of search were granted to them.

The Goldsmiths chiefly congregated in Cheapside, Old 'Change (so named from its proximity to the exchange for the King's coin), Lombard-street, Foster-lane, St. Martin-le-Grand, Silver-street, Goldsmiths'-street, Wood-street, and the lane adjacent to Goldsmiths' Hall. Of these, Cheapside was their principal place of residence, and the southern side from Bread-street to the Cross was known as Goldsmiths'-row, the shops being occupied by Goldsmiths. In 1629 a movement arose for making Cheapside, Lombard-street, and its vicinity the exclusive seat of the Goldsmiths and other sumptuous shops; and the King, having noticed certain mean houses in the area, directed the attention of the Corporation to the matter in an Order in Council, but the difficulty of securing reasonable accommodation for those dispossessed delayed the change. The Government of Charles I. also threatened the City with penal consequences if all the shops in the quarter were not let to Goldsmiths and like trades or closed till suitable occupants presented themselves.

Like other of the guilds, the Goldsmiths fulfilled a dual *rôle*—that of a fraternity, the object of which was largely to secure mutual protection, to promote social intercourse, and to administer charity; and that of a craft guild to promote the interests and guard the privileges of a craft, and, in common with most of the other guilds after a period of active trade regulation, they have largely reverted to what was their original functions. Their patron Saint was St. Dunstan, to whom there was a chapel dedicated in St. Paul's Cathedral, while it was St. Dunstan-in-the-East in which the brethren and sisters attended the obits of the deceased with wax lights in their hands, and on St. Dunstan's Day the yearly feast of the Guild was held.

The powers exercised by the voluntary association were subsequently confirmed by charters, the Wardens fining workmen for making wares which were under standard, and entering shops to seize false wares, also settling disputes between masters and workmen and punishing rebellious apprentices by flogging. Heavy fines were levied on those who slandered the Wardens or reviled members of the Fellowship, and control was exercised by the Guild both in London and the country.

In the early part of the fourteenth century the Company had an Assay Office, and the statute of 28 Edward I. provided that no vessel of gold or silver should leave the hands of the workmen until it had been assayed by the Wardens and stamped with the leopard's head, at that time part of the royal arms of England.

The native and foreign Goldsmiths were divided into classes enjoying different privileges. Firstly, the members of the Company who were mostly Englishmen, and whose shops
subject to the control of the Company
who made certain payments for the sup
of the Fellowship. The second class
prised the non-Freemen or "Allowes"—
is allowed or licensed. They were descr
"Allowes Englis," "Allowes Alicant," "Ali
Strangers," and other similar titles.

These paid tribute to the Company and
subject to their control. The quarterage
by members, the tribute of the "Allow
admission fees and fines constituted the
pany's original income. English Goldsm
frequently endeavoured without success
prevent foreigners settling in London, bu
was probably known that the best artists
often foreigners and that their exclusion w
be detrimental to the craft. In 1445 th
four strangers were sworn, in 1447 C
Spaen paid £8 6s. 8d. to the alms of St. Dun
to be admitted as a Freeman, and in
John de Loren paid £20 on a similar occas
Foreigners applying for the freedom were fo
to produce testimonials from the author
of the towns abroad where they had resi
and apprentices had to make masterpi
before gaining admission to the Fellowshi

The first of the Company's charters
granted by Edward III. in 1327. Under
provisions the Company were allowed to
honest, lawful, and sufficient men skille
the trade to inquire into matters of compl
who might reform defects in the craft and pu
offenders. It goes on to state that all t
who were of the Goldsmiths' trade shoul
in their shops in the High-street of C
(Cheapside), and no silver, plate, golden
silver vessels ought to be sold in the City
in the King's Exchange or in the said s
of Cheap among the Goldsmiths. It was fur
enacted that, as many Goldsmiths kept s
in obscure turnings and streets, and bo
vessels of gold and silver secretly wit
inquiring whether they were stolen or law
come by, and immediately melted them
to make into plate to sell to merchants trav
beyond the sea, those who secretly worke
the craft behind locked doors or in obs
places were heavily fined on discovery. To
vent such practices it was ordained that no
or silver should be manufactured or sent ab
except that which was sold in the K
Exchange or openly among the Goldsmiths,
that none pretending to be Goldsmiths sh
keep shops but in Cheap.

By two subsequent charters of the same
these privileges were confirmed and exten
and licence was given to the Company
purchase and hold tenements of the value of
per annum for the relief of poor members.

These rights and privileges were confir
under subsequent charters of Richard
Henry IV., and Henry VI., while Edward
by letters patent in his second year confir
previous charters, granting that the then
dens and their successors may be a corpora

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* The following articles on the City Companies have already appeared in our pages:—The Mercers' Company, March 31; the Grocers' Company, April 28; and the Drapers' Company, May 12. The Skinners' Company will be given on July 7. We shall give the Fishmongers' Company at a subsequent date.

body corporate to consist of and be lled the Wardens and Commonalty of the istery of Goldsmiths of the City of London, pable in law to purchase, take, and hold in rpetuity lands, tenements, rents, and other ssessions whatsoever of any persons that all be willing to give, devise, or assign the me to them. Their trade rights were also nfirmed. Numerous other charters followed, cluding one under James II., reserving to e Crown the right of control over the appointents of the Wardens and Clerk, an interference th the Company's powers which, like similar arters of the times, abrogating and annulling e independent powers of other City Companies, s made void under Act of Parliament in e reign of William and Mary. The governnt of the trade under the Company's charters ntinued down to the reign of Charles II., but some time before and in the interval prior the passing of the Act of 12 George II., c. 26, powers granted to the Company began to questioned, and the Goldsmiths thought expedient to obtain an Act of Parliament, ich was prepared by its officers and, together th enactments contained in the Act of & 8 Vict., c. 22, comprises the principal laws ating to the Goldsmiths' trade to-day. these Acts the Assay Office is regulated, d the charges made for the assaying and rking of plate are to be solely to defray expenses of the office, the Company being hibited from making any profit. The vers conferred on the Company are those the assaying and stamping of gold and silver te required to be assayed and stamped, and end to every part of England.

n connection with the coinage of the realm, Company have carried out what is termed "Tryal of the Pyx" ever since the reign of ward I., the first known writ for such a trial ring the date of 1281. The Mint officials bound to place in the Pyx for the use of jurors at such trial one coin out of every 00 gold coins and one coin out of every lb. Troy weight of silver coins. The ect of the trial is to ascertain if the metal which the coins are composed is standard they are of the prescribed weight. In ner times the trial was made at uncertain es, but the Coinage Act of 1870 prescribes t an annual trial shall be made, and since t date the Pyx has been brought to Goldths' Hall and tried annually. Previous the Act a jury of competent Freemen, nmoned by the Wardens, was charged by Lord Chancellor, who subsequently received r verdict. In earlier times the Sovereign netimes presided, and amongst others h James I. and Charles II. were present such trials. Now the jury is sworn by the King's Remembrancer and the verdict given in writing, after which it is published in the *Gazette*. The Pyx is the name given to the small box containing coins out of which those to be tested are taken.

During recent years coins from the branch mints in Australia and Canada have been included in the annual trial at the request of H.M. Government.

The site of Goldsmiths' Hall belonged in the reign of Edward II. to Sir Nicholas de Segrave, a brother of the Bishop of London. On his death the Company bought the premises, but the date when the Goldsmiths first built upon the site is unknown.

In 1365 we learn from an Ordinance that the Company assembled at their "common place" in the parish of St. John Zachary, and in a later entry, in 1380, there is mention of a new parlour and cellar being built, from which it would appear probable that the Goldsmiths made additions to the old house of Sir Nicholas de Segrave to adapt it for their purposes; in 1401 the Hall in Fasteres Hall is definitely mentioned. The second Hall is attributed to Sir Dru Barentyn, but no mention of it is made in the records until 1447, and its completion appears to have covered a period of many years. It was a building of considerable extent, containing a parlour and probably a Court-room, an armoury, granary, Assay Office, vaults, and chapel, and it had a courtyard. The Hall had long windows, those towards Huggin-lane being decorated with armorial bearings, and had a roof with a lantern and vane.

Stow, in 1598, speaks of it as "a proper house, but not large," and discredits the legend that Sir Bartholomew Read, Goldsmith, and Mayor in 1502, entertained more than 100 people in it.

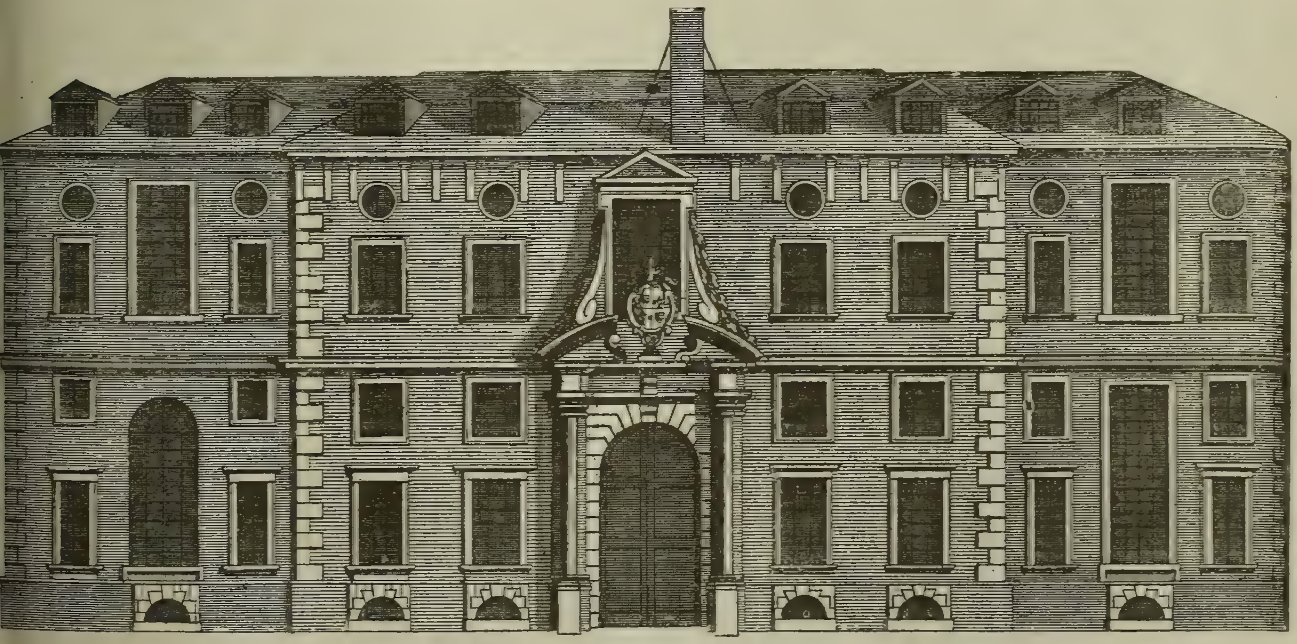
The third Hall was erected in 1634-6, the buildings being enlarged by the addition of the sites of ten houses, and Inigo Jones, the King's Surveyor, was consulted about the work, for which Charles I. gave his licence.

The Hall sustained much damage during the Great Fire, after which Jarman laid his plans for rebuilding before the Court in 1666-67; but the buildings were slowly erected in consequence of the want of funds, not being completed till 1669, while in 1681 portions of them were again destroyed by fire.

Jarman's Hall was a simple red-brick building, enclosing a paved courtyard with a lofty arched entrance. The Livery Hall, on the east of the yard, was paved with white and black marble and panelled. It would seem to have been an interesting and characteristic work of the period, though on a smaller and simpler scale than the fourth and existing Hall.

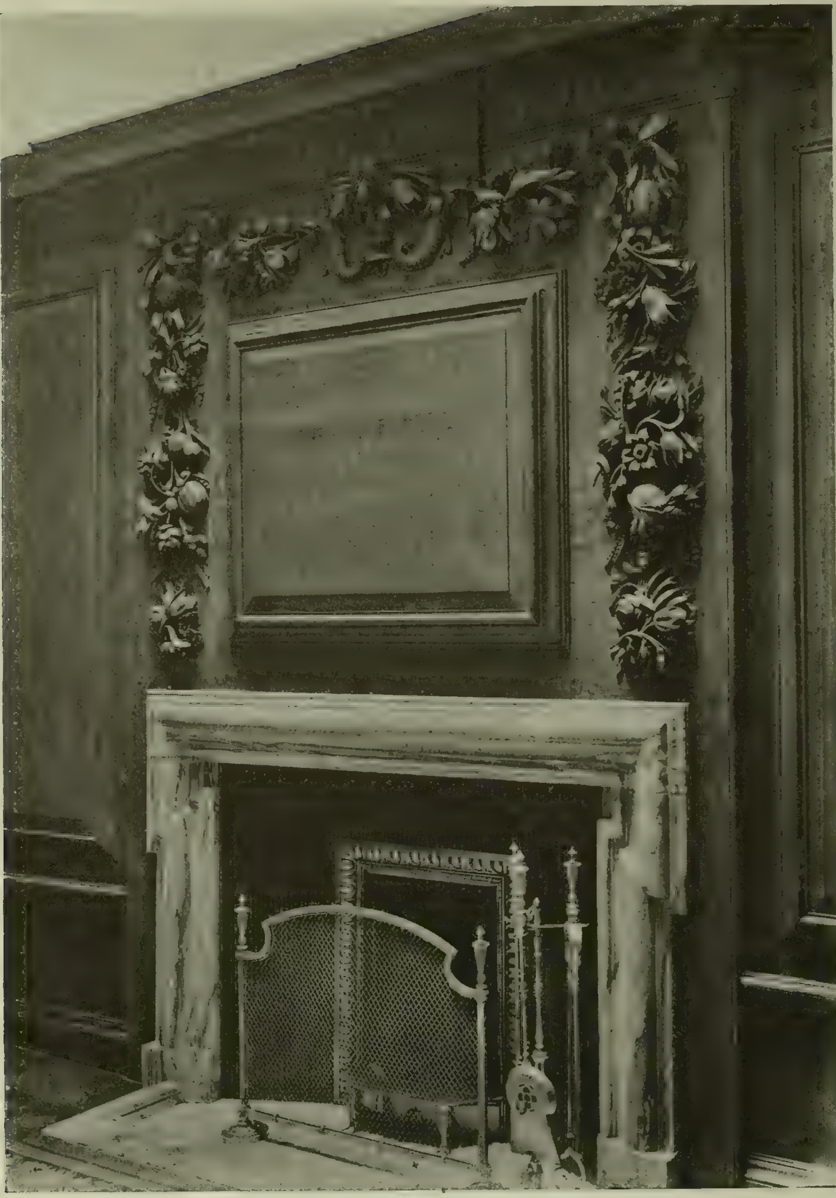
The present Hall was built from the design of Philip Hardwick, R.A., and was commenced in 1829 and opened on July 15, 1835. The plan on which most of the older Halls were laid out—that of a quadrangle surrounding an open court or garden—was abandoned for a symmetrical arrangement of greater dignity and impressiveness. The front to Foster-lane is treated in a Classical manner, and the central entrance leads to a handsome entrance-hall, panelled in oak from an old manor house at Acton. The fine ceiling was designed by Mr. A. Burnett Brown, the present Surveyor. On the right and left of the entrance-hall are offices, and immediately in rear and separated from it by a glazed and panelled screen the great marble staircase, which forms the most impressive feature of the building. The pedestals of the lower staircase flight are surmounted with figures representing the "Seasons," the work of Nixon, while in the central spaces between the coupled columns on either side of the stairway over are placed marble groups representing Cleopatra, the Libyan, Sibyl, and Medea, by Storey. Among other statuary which may be mentioned is Edward III., by Armstead, R.A., placed in a niche opposite to the first flight of the staircase. The Livery Hall is on the first floor, immediately in rear of the grand staircase, and is a finely-proportioned, dignified room of good architectural character and effective decoration. The only unfortunate feature in it are the windows, which are unpleasingly divided by mullions and transoms and filled with poor-coloured glass. Were these removed and the spaces glazed with clear glass with armorial medallions the gain in effect would be very marked. The front is occupied by the Court Dining-room, Drawing-room, and Court-room, forming a fine suite separated by wide doorways and admirably planned for receptions. The two end rooms of the suite are architecturally well conceived and proportioned; the Drawing-room is treated in a manner reminiscent of the Louis XV. style, but its detail is somewhat coarse and heavy in character for the type adopted. One of the best architectural features is the Binding-room, which Mr. Burnett Brown (Messrs. Brown & Barrow), redecorated with some old panelling, chimney-piece, and other woodwork, which was discovered in the basement of the present Hall, and are approximately of the date of William and Mary. The ceiling was lowered and a domed plaster ceiling introduced. The back part of the block contains the Clerk's house and the Assay Office, which communicates by a passage in the basement with additional premises on the opposite side of Gutter-lane.

Like other of the great Companies, the Goldsmiths have carried out a large amount of



The Third Hall of the Goldsmiths' Company, as designed by Jarman.

(From "Maitland.")



Chimneypiece in Binding-Room, Goldsmiths' Hall.

educational work and administered many charities, both on behalf of members of the trade with which they are connected and purposes of general charities. They have built and endowed almshouses in Acton in accordance with bequests made under provisions of the will of John Perryn in 1656, and St. Dunstan's Church and Vicarage, East Acton, was built and endowed in 1878 at a cost of £30,000, provided out of the corporate funds of the Company.

They also founded a Queen Victoria Commemoration Charity in commemoration of the sixtieth anniversary of the Queen's reign, and endowed it with £20,000 out of their corporate property. The interest is applied in the manner which is considered most conducive to the formation of provident habits among deserving and necessitous Goldsmiths and Silversmiths who have resided for ten years within a radius of twelve miles from Goldsmiths' Hall, and who have continuously exercised their craft for ten years previously.

In 1822 they founded six exhibitions tenable at Oxford and Cambridge of £20 each; in 1882 they had provided seventy-five scholarships tenable at the two Universities and of the annual value of £2,500. On the occasion of the opening of the new Hall in 1830 the Prime Warden was able to state that, in spite of the expenditure on the new Hall, "not one pension has been abridged, no charity has been diminished, and not one single petition for the relief of our poorer brethren has been rejected."

The Company have been connected with several well-known schools, among which are Stockport and Bromyard. In 1487 the Goldsmiths became trustees under a will of Sir Edmund Shaa for the payment of an annual sum of £10, to be applied to the support of a priest at Stockport "cunning in grammar and able to teach it." This was paid until 1830, when the Company greatly enlarged the school, increasing the stipends of the masters. By 1859 they had spent £30,000 on the school, which has since been transferred to local authorities, the Company endowing it with £290 a year in addition to the original £10.

The Goldsmiths became connected with Bromyard School in Worcestershire under the provisions of the will of John Perryn in 1656. He directed that £20 a year should be paid to a master in addition to £15 a year foundation grant. The school was remodelled in 1831 and the Company's contributions to it increased. On the suggestion of the educational authorities the school was ultimately replaced by a Secondary School for Agricultural Students in 1890, towards which the Goldsmiths' Company have contributed £10,000.

With other of the leading Companies, the Goldsmiths contribute towards the payment of £20,000 a year for promoting Technical Education to the City Guilds Institute, the buildings of which have also been erected out of funds contributed by the City Companies.

The Company have also in recent years given £87,000 to the Imperial College of Science and Technology for the extension of the City and Guilds Engineering College at South Kensington,
and have presented to the University o
London the site and buildings of the Goldsmiths
College at New Cross, as well as other gifts.

In 1892 the Goldsmiths gave £25,000 t
cover the cost of the erection of a block
dwellings by the Guinness Trust in Camberwel
a district in which many of the poorer membe
of the trade with which they are connecte
dwell.

In 1890 the duties on gold and silver plat
which had been collected by the Compan
for the Government, were abolished. This ste
had been considered to be advisable for a lon
period, but no steps had been taken, as it wa
felt that the repayment of the duties pai
on new and unused plate by dealers mu
in fairness be a precedent of the measure, an
the extreme difficulty and delicacy of carryin
out such an operation was felt to constitute
difficulty.

The Goldsmiths assisted the Government b
examining the stocks of all dealers in Londo
and the country, and in recognition of th
services they had rendered in this matt
their Clerk, Sir Walter S. Prideaux, received th
honour of Knighthood.

Our brief survey will show the importa
functions which the Goldsmiths' Compan
carried out in past centuries, and that, lik
other of the guilds, they now carry o
work of great importance and value whic
serves to supplement educational and charitab
work, while they still exercise functions whic
are in the highest degree essential to th
interests of the craft they represent and to th
public.

◆

THE LONDON COUNTY COUNCIL.

A MEETING of the London County Counc
was held on Tuesday in the County Ha
Spring-gardens, S.W., Mr. A. F. Buxto
Chairman, presiding.

Loan.—Sanction was given to the borrowi
by the Woolwich Borough Council of £1,3
for street improvements.

Electric Radiators.—On the recommendati
of the Fire Brigade Committee it was agre
to invite tenders from selected firms for t
supply of electric radiators at thirteen fi
stations.

Charging Apparatus.—It was agreed th
tenders be invited from selected firms for t
supply of motor generators for the chargi
apparatus at the Fulham and Millwall fi
stations.

Working-class Dwellings.—In a report su
mitted by the Housing of the Working Class
Committee, dealing with working-class dw
lings built and demolished during the year 191
it was stated that for the second year there h
been a net decrease in working-class accomm
dation in the County of London. The Co
mittee report that the most important conc
sion suggested by the return for 1914 wou
appear to be that up to the outbreak of w
there was no indication of a revival in t
building of working-class houses in Grea
London. There is little doubt that the numb
of vacant houses and tenements suitable f
working-class occupation in the country, a
even in the extra-London districts, is now sma
while in some districts, such as Woolwich, the
is a shortage of accommodation.

*South-Eastern and London, Chatham, and Do
Railways Bill.*—The Parliamentary Committ
reported that instructions have been gi
for the renewal, in the House of Commo
of the Council's opposition to the South-East
and London, Chatham, and Dover Railways B
with the object of securing the rejection of t
power relating to Charing Cross Bridge.

◆

THE REPAVING OF PARK-LANE.

A difficulty has arisen in connection with t
proposal for the repaving of Park-lane. T
estimate for wood-paving, made in Decemb
allowed £7,800 for the work, but the low
tender received is for £10,403, or £2,603 m
than the estimate. The difference is due to
rise in the price of timber. There was, howe
a tender for asphalt paving at £6,636.

THE BUILDING TRADE.

ISEASES OF OCCUPATION AMONG PAINTERS AND PLUMBERS:

THE REMEDY.

WE have received the following letter from a correspondent to whose remarks reference is made on ge 414:—

SIR,—Your readers have noticed in the *ard of Trade Labour Gazette* a monthly port of Diseases of Occupations in Factories d Workshops—both cases and deaths.

" Cases include all attacks, fatal or otherwise, orted to the Home Office. . . . Deaths lude all fatal cases reported during the nth. . . .

" The total number of cases of poisoning . . reported to the Home Office under Factory and Workshop Act during April, 16, was fifty-two. . . . In addition, four ses of lead-poisoning (one of which was fatal) re reported among house-painters and mbers, but notification of these cases is not ligatory." Further: "There were thirty-one ses of lead-poisoning (including four deaths) ong house-painters and plumbers during first four months of 1916, compared with ty-three cases (including seventeen deaths) ring the corresponding period of 1915."

Now I wish to impress upon your readers at these figures do not indicate the total mber of cases that occurred, but only those ich were reported; "but notification of ese cases is not obligatory." And why, I y be asked, is the certifying surgeon under obligation to report to the Home Office those ses of lead-poisoning which occur among inters and plumbers? Because house-inters and plumbers, with few exceptions, not engaged in factories and workshops, nsequently they are unprotected, and not der the jurisdiction of the Factory and orkshop Act.

During four months, taking the average 1915 and 1916, there were 105 cases reported factories, including a total of seven deaths, between three and four deaths in each four nths. It is significant that during the me two periods, on the average, there were orted only thirty-seven cases among house-inters and plumbers, with a total of twenty-e, or an average of over ten deaths. From ese figures it would appear that in factories ly 3 per cent. of cases are fatal, but among use-painters and plumbers over 26 per cent. cases are fatal. Of course, such figures are isleading unless modified by the words, out notification of these cases is not obliga-ry," which words were added in the *Labour zette* for May, 1916, by the courtesy of the itor, consequent upon the writer protesting ainst the misleading tendency of the figures, themselves, previously published.

If now we accept the reports of fatal cases to and including April, 1916 (which are pplied by the Registrar-General), namely, enty-one deaths in eight months, and apply e same comparison of deaths to cases as in ctories—that is, seven deaths to 210 cases ring the same two periods—we must multiply e 210 by twenty-one and divide by seven. ne result is, of course, 630 cases, namely, e number of cases among house-painters d plumbers in eight months, instead of enty-four which were reported. I believe en 630 to be a grave under-estimate.

If now your readers procure the condensed eport of the Departmental Committee on the vils of Lead Compounds in Paint [Cd. 7882],* d turn to page 78, they will read as follows:—

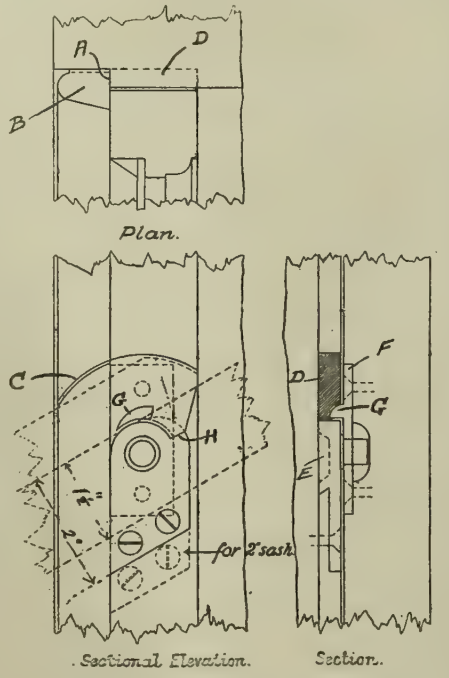
That in every 100 deaths which have occurred nong members of painters' societies between irteen and fourteen occurred from causes attributable to lead"; also, "that the average age at death, due to all causes in the painting industry, is no less than eight years younger than all males." Further, a critical medical examination of working painters, conducted in Chicago for the American Government, demonstrated that the average progeny of operative painters falls short by half of their ancestral average. Lead products are racial poisons! (*The American Journal of the Medical Sciences.* June, 1914. Pages 788-803. Philadelphia: Lea & Febiger. 2s. 6d. net.)

I have endeavoured to impress upon your readers the serious character and extent of the evil. Now for the remedy. And here let me say I have no personal ends to serve.

It has been proved by various service trials, extending over many years, on sea and land, that a durable fine white pigment serves every purpose, made from oxide of zinc, the base of which pigment is *hydrate of zinc* in chemical combination with oil. This has proved successful under conditions fatal to white-lead; and it is equal to red-lead for pointing and cementing and coating metal surfaces. Before, however, this beautiful pigment can be made commercially available the production of zinc oxide as well as zinc spelter must become a British industry; hence the importance of making arrangements for adequate supplies of Australian and other zinc ore or concentrates. Limitation of space forbids my going into further details, but I would urge the speedy provision of pigment to replace poisonous white-lead and red-lead in the national interest. PHILADELPHIAN.

AN IMPROVED WINDOW FITTING.

WE have received a specification and seen a model of an ingenious device for doing away with the unsightly arrangement of beads round centre-hung sashes, which has been provisionally protected (Provisional Patent No. 21,408) by Mr. J. Stanford, 25, Briscoe-buildings, Brixton-hill, S.W., and which we illustrate. The inside bead is done away with, the outside bead is fixed to frame and sash in the usual manner. A rebate A is formed of half the width of the bead, and a small pocket D formed in the frame concealed by the sash, which allows space for the upper end of the bead on the sash to move in when the sash is opened. The pivot consists of two parts—a plate E with a projecting pivot pin and plate F, a corresponding bearing to receive the pin, and a curved projecting stop G. E is rounded at the top and has a shoulder H, against which G stops to limit the opening movement.



Plan.

. Sectional Elevation.

Section.

An Improved Window Fitting.

We understand the invention has been tested and found to be watertight, and it certainly has a better appearance than the centre-hung sash as usually carried out.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Bedford.—Messrs. W. H. Allen, Son, & Co. have submitted to the R.D.C. plans for the erection of a building in the parish of Biddenham.

Bexhill.—Plans passed by the T.C.:—Four semi-detached houses in Cooden-drive (Mr. G. E. Maynard), Messrs. Piper & Sanders; hall and cinema, Marina (Mr. G. H. Gray), Messrs. H. Pulham & Co.; new porch and entrance to 2, Woodville-road (Mr. J. B. Wall), Mr. J. W. Webb.

Bradford.—The Bradford Health Committee has decided to recommend that a laundry, to be equipped with the plant now at Bierley Hall Hospital, should be provided at Grassington Sanatorium, and that to serve the whole of the remaining departments under the control of the Health Committee a central laundry should be provided at the disinfecting station, Canal-road. The City Architect has been instructed to prepare sketch plans and estimates for the work.

Burryport.—The Plans Committee has considered the plans for a new cinema near the Police Station

Chiswick.—The Licensing Justices have sanctioned plans for alterations at the Pack Horse and Talbot, High-road, Chiswick.

Coventry.—The City Council has approved the following plans:—Timber store, Carlton-road, for Messrs. B. Laird & Co.; additions to works, Smith-street, for T. Smith's Stamping Works, Ltd.; laboratory (amended), Cash's-lane, for the Standard Motor Company, Ltd.; store shed (site only amended), Upper York-street, for Alfred Herbert, Ltd.; factory (amended), Hawkins-road, for the Metallurgical Company, Ltd.; mess rooms, Radford Works, Daimler-road, for the Daimler Company, Ltd.; conversion of existing premises into picture theatre, corner of Cox-street and Ford-street, for Mr. E. Strong; mess-room, Drapers Field Works, Sandy-lane, for the Daimler Motor Company, Ltd.; motor house, rear of 45, Spencer-avenue, for Mr. E. N. Hillier; bacon store, etc., rear of 8, Cook-street, for Mr. R. P. T. Darlington; extension of machine shop, Edgewick Works, Canal-road, for Alfred Herbert, Ltd.; erecting shop, Broad-street, for the Condor Engineering Company, Ltd.; one house (rebuilt), Belvedere-road, for Mr. E. Mortiboy; bridge for cables over canal, opposite the Refuse Destructor Yard, for the Electric Light Committee; alteration to Nos. 412 and 414, Foleshill-road, for Messrs. Freeman, Hardy, & Willis, Ltd.; additions to premises, corner of Hastings-road and Brighton-street, for Messrs. Mitchells & Butlers, Ltd.; shop front, No. 33, Cross Cheaping, for Messrs. Hendry & Co.; six houses, Queen Mary's-road, for Mr. J. Clifton; four houses (two houses amended), and six garages, St. Andrew's-road, for Mr. T. F. Bird; one house, Collingwood-road, for Mr. H. Davis; extensions to laundry, Waveley-road, for Mr. W. Neal; lavatory extension, Northey-road, for Messrs. Webster & Bennett, Ltd.; locomotive shed, Radford Works, Daimler-road, for the Daimler Company, Ltd.; drainage to two houses, Crescent-avenue, for Mr. F. Smith. At a recent meeting of the City Council the expenditure of £1,575 by the Electric Light Committee on a scheme for

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* [Cd. 7882.] Price 1s. 2d. (London: Wyman & ns.)

* See also our list of Competitions, Contracts, etc., on page 428.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Brick-layers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9½	9½	9½	9½	9½	9	8	6½	6½	6½
Accrington	10	10	10	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	10	6½	6½	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¼	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8*	9	6½	5½	5½	6
Birkenhead	1/-	1/-	1/-	11	11	1/-	9½	8	8	8
Birmingham	11½	11½	11½	11½	10½	11†	10¼	8½	8½	8½
Bishop Auckland	9	9	9	9½	10‡	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10½	11	10½	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10½	10½	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9½	9½	9½	10	9	9½	8¾	7	7	7
Bury	11	11	10½	9	10	10½	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	10¼	8¾	6¼	7	6½
Chesterfield	9	9½	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	10	10	9	9	9½	8	7	7	7½
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7½	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9½	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	9¼	7	7	7
Harrogate	9½	9½	9½	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10¾	10½	10½	10½	10	10	9	8½	8½	8½
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9½	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6¾	6¾	6¾
Leeds	10¾	10¾	10¼	10½	10½	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10½	9	8	8	8½
Lincoln	9	9½	9½	9	8½	8½	8	6	5½	6½
Liverpool	1/-	1/-	1/-	11	11½	1/-	10½	8	8	8
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	9	9	9	8½	8½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	10	9½	8½	—	9½	9	7	7	7
Merthyr Tydfil	9½	9½	9½	9½	9½	9	8½	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9½	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	11	10	8½	8½	9
Oldham	10½	11	11	10	9	10	9½	7	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8½	6½*	6½*	6½*
Pontypridd	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Portsmouth	9½‡	9½‡	9½‡	9½‡	9½	8½‡	7½	7‡	7‡	7‡
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10½	10	9¼	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	10	10	10	10¼	8¾	10	9	6¾	6¾	6¾
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10	9¾	9¾	9½	10¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	9¼	9¼	9½	—	8½	7	6¼	6¼	6¼
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	10½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	8	8	8	8	7½	7½	7½	6	6	6
Sunderland	11	11	11	11	10‡	9½	9½	7¼	7¼	7½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	9	7	7	7
Walsall	10	9½	9½	9½	8½	10	8¼	7¼	7¼	7¼
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10½	10½	10	10¼	—	9½	8	7½	7½	7½
Wigan	10½	11	10	10	9½	10¼	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	10½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	8	6½	6½	6½
York	9¾	9¾	9½	9½	9½	9½	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 2s. 6d. per week granted.

the erection of a coal storage was approved; improvement of Holbrooks-lane at a cost £2,330 was sanctioned; and a slight alteration the housing scheme at Stoke Heath was agr to, this making provision for ten shops and houses instead of 600 houses.

Dublin.—The Paving Committee of the Dub Corporation have prepared a report on the qu tion of the widening of Wexford-street, R mond's-hill, and South Great George-stre The total cost, including the acquisition of p perty, is estimated at £86,000.

London.—The Licensing Justices have sa tioned plans for alterations at the Grapes, Lit Earl-street—licensee, Mr. William Robert Tayl and also the application by Mr. Harold Waldu for sanction to vary plans of alteration at National Hotel, Upper Bedford-place.

Penzance.—The L.G.B. Inspector has inform the Penzance Guardians that he would stron recommend the scheme for the improvement the workhouse laundry as necessary.

Portishead.—The U.D.C. has accepted tender of Messrs. Biss & Co. for repairing a painting the seats and shelter on the Esplana

Richmond (Yorks).—The Richmond R.D.C. considered an offer made by the War Office the construction of a new road from Richmo to Hipswell.—The proposed new road would from Richmond railway-station *viâ* St. Martin and join the Hipswell road close to Hipsw Lodge. The estimated cost is £7,000.

Rotherham.—The Housing Committee ha inspected a site of nine acres of land for erection of workmen's dwellings near the A warke pumping station, and they recomme that the Town Clerk negotiate with the own for its acquisition.

Smethwick.—Plans approved by the T.C. Workshop and shedding for Mr. G. Smart St. Paul's-road; offices and lavatories for Mess Buckley, Ltd., in Cornwall-road; alterations premises in Rolfe-street, for Messrs. S. W. Stephen & Co.; additions to works in Wa street, for the Soho Drop Forgings Compa Ltd.; lavatories and office fittings in Halfor lane, for Messrs. Henry Hope & Sons, Lt motor garage in Sandon-road, for Messrs. W church Bros.

Tipton.—Plans have been presented to the D. for the erection of a hook and eye factory Gate-street, and a foundry in Factory-road.

Uxbridge.—Plans for additions to a cottage Greenford-road, Northolt, for Mr. G. Purs have been approved by the R.D.C.

Wanstead.—By arrangement between the Ci Corporation and the Wanstead U.D.C., a fo path is to be constructed across that portion Epping Forest known as Bushwood, at Wanste

Wareham.—The County Magistrates ha approved amended plans of alterations to Railway Hotel, by Wareham Station, proposed be carried out by Messrs Jno. Groves & So Ltd., of the Hope Brewery, Weymouth.

Worcester.—The City Council propose to bui a large factory at Blackpole.

York.—The following plans have be approved by the Streets and Buildings Comm tee of the York Corporation:—Messrs. Pearse Son, additional office, Lendal; Messrs Rowntr & Co., Ltd., temporary blacksmith's shop a store, Haxby-road Works; Messrs. Rowntree Co., Ltd., temporary cardbox store, Haxby-ro Works; Mr. W. Dixon, conversion of thr cottages into one, Bay Horse-passage, Walmga

GENERAL BUILDING NEWS.

INFIRMARY, REDHILL.

A new infirmary has been added to t Guardians' Institution at Redhill. T principal front faces the Common. T building consists of a central portion, in whi are situated the smaller wards and administr tive rooms, flanked at each end by the day-roo projections and large wards. Inside a centr hall and passage connects the east and we entrances with a long corridor, which com municates with the various rooms by runnin the whole length of the central portion of t building. In the centre on the ground floor the duty kitchen, adjoining which are vario rooms, such as doctors' consulting, chief nurse office, dispensary, etc. The wards compri four large rooms for sixteen beds each, a smaller rooms for three, two, and one be respectively. There are two day-rooms wit large bays, and on both floors large verandah from which escape staircases descend to t ground. The operating suite consists of thr rooms. The floors of most of the rooms a polished pitch-pine. The building is heated a supplied with hot water and lit by electricit and is constructed to resist fire. The build was Mr. J. J. Pink, Merstham, Horley, a Kingswood. The systems of electric lightin bells, and telephones have been intsalled Messrs. Tamplin & Makovski, of Reigate; a the heating system by Messrs. G. H. Haden Sons, of London. The architects were Messr T. R. and V. Hooper, of Redhill.

TRADE NEWS.

the headquarters of the Commanding r at Ballygunj, India, the inner rooms for al years caused much annoyance on account ere dampness. We hear that the trouble ow been overcome with a Pudloed cement ring on the floors and walls.

e Chadderton new Smallpox Hospital, Oldham, is being supplied with Shorland's e-fronted warm-air ventilating patent hester stoves with descending smoke flues lessrs. E. H. Shorland & Brother, Ltd., ilsworth, Manchester.

ssrs. Robert Boyle & Son, of 64, Holborn ct, have introduced a new air-pump ator which is claimed to be a great vement on previous models. It is ately weather-proof in all circumstances, ree from the possibility of down draught.

nodel (No. 175), which we illustrate, is from the best quality close annealed ised-steel plates, and is being extensively or war work. The price has been kept spite of the greater cost, in order to large demand not only in this country those of our Allies.

er the direction of Mr. W. Ralph Low, B.A., Boyle's latest patent air-pump tors have been applied to the Hoffmann acturing Company's extension to their es at Chelmsford.

◆

TRADE CATALOGUE.

have before us a copy of the first issue loor Slab Reinforcement," a booklet in the interests of B.R.C. Fabric by itish Reinforced Concrete Engineering ny, Ltd., 1, Dickinson-street, Man-. It is a neat and interesting little tion, containing useful matter on the of reinforced concrete, and is well ted. In addition to a long list of ment departments, railway companies, any public bodies who are using B.R.C. the pamphlet includes some notes on lar features in floor slab reinforcement by chard Holt, architect, of Liverpool.

◆

NEW COMPANIES.

undermentioned particulars of new ies recently registered are taken from. ily Register compiled by Messrs. Jordan s, Ltd., Company Registration Agents, ry-lane, W.C. :—

ON ESTATES, LTD. (143,755). Regis-lay 3. To purchase and traffic in land ing minerals) and buildings in mberland, Durham, and Yorkshire, to and turn same to account, to construct, ublic works, places of amusement, e grounds, etc. Nominal capital, in 40,000 £1 shares.

LYNDIN PARTNERS, LTD. (143,768). Registered May 4. To carry on business of ironfounders, mechanical engineers, manufacturers of machinery, tool makers, brass founders, metal workers, builders, painters, metallurgists, gas makers, etc. Nominal capital, £1,000 in 1,000 £1 shares.

HARVEY & WHITEHOUSE, LTD. (143,852). Registered May 16. To carry on business of brass and general iron founders, casters in cast-iron and other metals, manufacturers of ventilators and other sanitary castings, iron, builders and general merchants. Nominal capital, £100 in 100 £1 shares.

T. B. LEVER & SON, LTD. (143,885), 42, Cheverton-road, Upper Holloway, N. Registered May 19. To acquire and carry on the business of builders, decorators, and contractors, now carried on by T. B. Lever and L. Balston at the above address and elsewhere as T. B. Lever & Son, and to enter into an agreement, etc. Nominal capital, £1,000 in 1,000 £1 Ordinary shares.

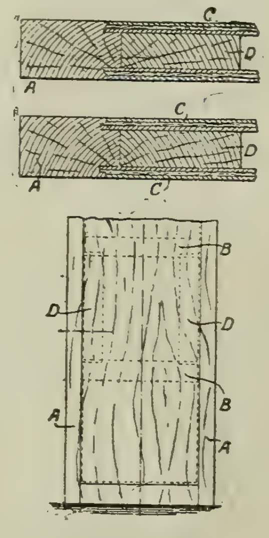
EDMONDSON BROTHERS (MORECAMBE), LTD. (143,921), Green-street, Morecambe, Lancs. Registered May 24. To carry on business of builders, timber merchants, timber importers, general contractors, sawyers, masons, plasterers, slaters, plumbers, glaziers, etc. Nominal capital, £2,000 in 2,000 £1 shares.

◆

SELECTED PATENT.

22,330 of 1914.—Alonzo Felton: Doors.

This relates to a door having its surface plain and unbroken to facilitate cleaning, and consists of a frame A recessed on the inner edges to receive panels C, which are formed of three-ply wood and lie flush with the frame members. The rabbeted recesses may be plain or undercut.



22,330 of 1914.

Preferably a single panel is used on each side and secured by glue and nails or screws, and the inner space may be packed with insulating material. To secure the lock in the door, a strengthening piece D may be fitted between the cross-rails B, or a cross-rail alone may be used.

◆

LAW REPORTS.

OFFICIAL REFEREE'S COURT.

(Before Mr. POLLOCK.)

The £97,000 Claim:

Spencer, Santo, & Co. *v.* Commissioners of H.M. Works and Public Buildings.

AFTER a week's adjournment owing to the indisposition of Mr. R. N. Patten, the chief witness in support of the plaintiffs' case, the hearing of this action was resumed on Monday, May 29, when Mr. Patten was recalled and further cross-examined by Sir R. Acland, K.C., after having already been in the witness box for nine days.

The witness was closely questioned during the whole of Monday, Tuesday, and Wednesday by Sir Reginald upon the details of the work, particularly in regard to the stone, iron, and concrete work, the alterations in which, it was alleged, had been prejudicial to the plaintiffs. As to the concrete work, he was unable to say what the cost per foot run was, in fact, although it was considerably more than the contract price, owing to the alterations in the plans. The stonework had been enhanced in cost by the largely increased number of stones used and the increased number of joints to be made in consequence.

OFFICIAL REFEREE'S COURT.

(May 23.)

(Before Mr. MUIR MACKENZIE.)

Alleged Breach of Repairing Covenant:

Amos *v.* Stewart and Others.

IN this action the plaintiff, the lessee, claimed possession from the tenants of 32, Grosvenor-terrace (formerly Brunswick-terrace), Camberwell, on the ground that there had been a breach of the repairing covenants of the lease.

Mr. Charles Church appeared for the plaintiff and Mr. Martin Brooke for the defendants.

Mr. Stewart was the actual occupier of the premises, which were also occupied by three other tenants, each of whom rented a floor, and they were all joined as defendants. The plaintiff was the holder of a lease from the ground landlord, and the claim for possession was against all the occupiers and as against a Mrs. Wilson, who was a sub-lessee for damages.

In the defence it was claimed that there had been a substantial compliance with the covenants of the lease in accordance with the notices served upon the tenants.

The Referee said, as to the law on the subject, that he proposed to inquire whether the covenants of the lease had been complied with, not whether the notices served upon the defendants had been complied with.

Mr. Church said that witnesses would be called to prove that, having examined the lease and the premises, notices had been served upon the tenants to put the place in repair in accordance with the terms of the lease.

Mr. William Grellier, F.R.I.B.A., architect, of Queen Anne's-gate, stated that he examined the premises on behalf of the freeholder in April, 1915, and he prepared a schedule of dilapidations, having present in his mind the scope and operation of the covenant to repair as contained in the lease. Having prepared the schedule, he sent it to the plaintiff, and did not have anything more to do with the property until April last, when he again visited the premises, and found that the notices served had not been complied with.

The Official Referee said that the repairs appeared to be trivial, and it was scarcely to have been expected that a gentleman of the position of the witness in the profession would have been called upon to make a schedule of them.

Witness added that when he visited the premises in April, 1916, he found that the work had not been done in accordance with the notices.

A large number of witnesses were called on both sides, amongst them being, for the plaintiff, Mr. Gordon H. Grellier, P.A.S.I., and Mr. L. Falkingbridge Parker, M.S.A., and for the defendants Mr. W. A. Head, P.A.S.I., and Mr. C. W. Horser, F.S.A.

The Official Referee, in giving judgment, said that Mrs. Wilson acquired a sub-lease of the premises in 1914, at which time it was in a dirty and dilapidated condition. She immediately put it in the hands of the builder and spent some £90 upon it. But immediately afterwards a surveyor inspected it for the freeholder, and sent to him a schedule of dilapidations. The plaintiff, who was an estate agent, and manager for the freeholder, passed the schedule on to the underlessee. From the evidence it appeared that Mrs. Wilson had kept the house in sufficient repair to comply with the covenants of the lease, and he therefore found that there had been no breach of covenant which would entitle plaintiff to possession. The action to turn the defendants out would therefore be dismissed with costs.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, xviii; Auction Sales, xx. Certai conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bin themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be mad for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willin to submit tenders, may be sent in.

⁎ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while ever endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

June 9.—**Pocklington.**—Painting, etc.—Outside painting, etc., required at the Pocklington Grammar School, for the Governors. Specifications may be seen upon application to the Head Master on the school premises.

June 10.—**Gildersome.**—Rebuilding.—For mason's, concreter's, joiner's, plumber's, plasterer's, slater's, and ironfounder's work in rebuilding Maiden Mill, Gildersome, for Messrs. A. & A. Brooke. Plans, etc., of Mr. T. A. Buttery, Licentiate R.I.B.A., architect and surveyor, Queen-street, Morley, and 1, Basinghall-square, Leeds.

June 12.—**Barrow-in-Furness.**—Sub-station.—For the construction of a sub-station on Walney Island for the Electricity Committee. Mr. L. Hewlett, Town Clerk.

June 12.—**Kilmarnock.**—Painting.—For painter work at the Art Galleries and Agricultural Hall, for the Corporation. Specification from the Subscriber. Also for painter work at Kirklandside Hospital. Specification from the Subscriber. Mr. R. O. Blackwood, Burgh Surveyor, Kilmarnock.

June 13.—**Lisnaskea.**—Cottage.—The Directors of the Great Northern Railway Company (Ireland) invite tenders for the erection of a gate-keeper's cottage at Barnhill Level Crossing, near Lisnaskea. Drawing and specification at the Engineer's offices at Dublin and Belfast, and forms of tender from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit, £1 1s.

June 13.—**Worksop.**—Painting.—For the painting of walls and ceilings of the rooms of the Old Infirmary, etc., at the Union Workhouse, Worksop, for the B.G. To view the premises, application to the Master at the Union Workhouse, Eastgate, Worksop.

June 15.—**Hurdsfield.**—Improvement of Staircase.—For the improvement of staircase at the Daybrook-street School, Hurdsfield. Quantities, etc., at Mr. Jabez Wright's office, architect, Macclesfield.

June 15.—**Wellington (Salop).**—Alterations, etc.—For alterations and building work to the main building and children's home, probationary wards, etc., at the Union, for the B.G. Plans, etc., of Messrs. Fleeming, Hickman, & Fleeming, architects, Market-square, Wellington.

June 19.—**Lanark.**—Painting.—The District Committee invite tenders for painter work of the undernoted bridges, namely:—(1) Clyde Bridge, near Motherwell; (2) Bothwell Bridge; (3) Cambuslang Bridge; (4) Prior Bridge, between Blantyre and Cambuslang; (5) Holm Forge Bridge, between Bellshill and Motherwell. Copies of the specification, etc., of Mr. Robert Spittal, Road Surveyor, District Offices, Hamilton.

June 19.—**Swindon.**—Painting, etc.—For painting and decorating at several schools, for the Corporation. Specifications, etc., from Mr. W. Seaton, Education Office, Town Hall, Swindon.

✱ June 28.—**Bedfordshire.**—Painting and Repairs.—The Bedfordshire C.C. invite tenders for painting and repairs to schools.

✱ June 29.—**Kensington.**—Redecoration and Repairs.—The Kensington Guardians invite tenders for decorative work and repairs to the infirmary.

July 7.—**Wilts.**—Alterations, etc.—The General E.C. of the Wilts C.C. invite tenders for carrying out works in alterations, additions, repairs, and renovations, etc., at various Council schools during the summer vacation, 1916. Plans, etc., of Mr. J. George Powell, County Surveyor, County Surveyor's Office, Trowbridge.

July 10.—**Harwich.**—Refuse Destructor.—For the design and construction of a refuse destructor. Sketch plan of site and general conditions of Mr. F. Harold French, Borough Surveyor, Harwich. Deposit, £1 1s.

No Date.—**Nottingham.**—Demolition of Property.—The Housing Committee invite tenders for the pulling down and removal of several blocks of buildings on the Carter Gate area. Schedule of the City Engineer, Guildhall, Nottingham.

No Date.—**Thurles.**—Renovation.—For renovation of Confraternity Hall, Thurles. Specification, etc., from the architects, Messrs. W. H. Byrne & Son, 20, Suffolk-street, Dublin, or from Presbytery, Thurles.

FURNITURE, MATERIALS, etc.

June 9.—**London.**—Furniture.—The Commissioners of H.M. Works, etc., invite tenders for the supply of furniture. Forms of tender, etc., of the Controller of Supplies, H.M. Office of Works, King Charles-street, Westminster, S.W.

June 13.—**Manchester.**—Materials.—Supply to the Manchester Corporation Gas Works of builders' materials during twelve months ending June 30, 1917. Forms of tender of Mr. Fredk. A. Price, Superintendent, Gas Department, Town Hall, Manchester.

June 15.—**West Bromwich.**—Paints, etc.—Supply to the West Bromwich Union of paints, oils, etc. Estimates of quantities, etc., of Mr. A. H. Ward, Clerk, 22, Lombard-street, West Bromwich.

June 17.—**Dublin.**—Paints, etc.—Supply to the Directors of the Cavan and Leitrim Railway Company, Ltd., of oils, paints, varnishes, etc. Mr. R. R. Stewart, Secretary, 19 and 20, Fleet-street, Dublin.

✱ June 17.—**Guy's Hospital, S.E.**—Materials.—The House Committee of Guy's Hospital invite tenders for supply of certain materials.

June 19.—**London.**—Oils, etc.—Supply to the Asylums and Mental Deficiency Committee of the London County Council of oils, etc. Forms of tender of Mr. H. F. Keene, Clerk of the Asylums and Mental Deficiency Committee, 2, Savoy-hill, Victoria Embankment, W.C.

June 19.—**Upton (near Chester).**—Oils and Colours, etc.—Supply to the Cheshire County Asylum, at Upton, near Chester, of oils and colours, building materials, etc. Forms of tender of the Steward of the Asylum.

June 19.—**Wrexham.**—Materials.—Supply to the Guardians of painters' and glaziers' materials. Forms of tender of Mr. T. J. Thomas, Master, Workhouse, Wrexham, and Mr. E. A. Knight, Superintendent of Scattered Homes, 23, Chester-street, Wrexham.

June 22.—**London.**—Engineers' Oils, etc.—Supply to the B.G. of West Ham Union during the three months from July 1, 1916, of engineers' oils, etc. Forms of tender, etc., of Mr. Thomas Smith, Clerk, Board Room, Union-road, Leytonstone, N.E.

July 1.—**Golbourne.**—Materials.—Supply to the U.D.C. of builders' materials. Forms of tender of Mr. H. Eckersley, Clerk to the Council, Council Offices, Worsley-street, Golbourne.

September 6.—**Aberaman.**—Oils, Paints, etc.—Supply to the Directors of the Powell Duffryn Steam Coal Company, Ltd., of grease and oils, paints, etc. Forms of tender, etc., of the Stores Manager, Aberaman Offices, near Aberdare.

ENGINEERING, IRON, AND STE

June 10.—**Keighley.**—Electric Fittings. the fitting up with electricity of the temp war hospital buildings at Morton Banks. fications from Messrs. Moore & Crabtree, tects, Keighley.

June 10.—**Matlock.**—Tramway Cable.—S to the U.D.C. of about 1967 lineal yds. of steel wire tramway cable, 3½ in. in circumfe with manila core Particulars from Mr. D. Evans, Tramway Manager, Town Matlock.

No Date.—**Cardiff.**—Iron Bars, etc.—S to the Directors of the Cardiff Railway pany for the six months ending Decemb 1916, of iron bars, bolts, and angle iron, etc. Forms of tender of the Stores Superi ent, Cardiff Railway, Bute Docks, Cardif

ROAD, SANITARY, AND WATE WORKS.

June 14.—**Leeds.**—Flagging, etc.—Fo flagging, kerbing, and paving of the road south side of the new Tramways Offices in gate, for the Leeds Corporation. For tender, etc., at the Highways and Perm Way Department, 155, Kirkstall-road, Lee

June 15.—**Listowel.**—Main, etc.—Fo laying down of about 1,500 lineal yds. o main and improvements of the intake wo connection with the water supply to the t Ballybunion, Co. Kerry, for the Listowel Drawings, etc., of Mr. Brian E. F. S M.Inst.C.E.I., 57, George-street, Limeri of Mr. Thomas O'Connell, Acting Clerk Council, Boardroom, Listowel. Bills of tities from the Engineer. Deposit, £2 2s

✱ June 21.—**Erith.**—Sewerage Works Erith U.D.C. invite tenders for sewerage within the urban district.

June 21.—**Erith.**—Extension to Swi bath, etc.—For carrying out an extension open-air swimming-bath in Walnut Tre Erith, and the fixing of eight washing and other incidental work, for the U.D.C. etc., from the Surveyor to the Council, Offices, Erith.

✱ June 28.—**Bedfordshire.**—Repairing grounds.—The Bedfordshire C.C. invite for tar-painting and repairing school grounds.

No Date.—**Manchester.**—Sandstone, Supply to Bradford Iron Works, Manches about 2,500 tons of broken sandstone and for concreting purposes. Forms of tende of Mr. Harry Burke, civil engineer. Mary's-gate, Manchester.

Public Appointment

✱ No Date.—Architect's Assistant. Swansea Borough Council invite applicati the above temporary post. Salary, £3 3s.

Auction Sales.

✱ June 14.—**Hayes, Middlesex.**—Fuller, Horsey, & Co. will sell by auct the premises, the machinery, plant, an of a motor lorry and wagon builder.

✱ June 20.—**Deptford.**—Messrs. Jenkins & Webster will sell by auction, on the pr the machinery, plant, and freehold prem a builder and contractor.

✱ June 20.—**St. John-street-road.**—Mr Bowen will sell by auction, on the premi stock and plant of a builder and contrac

[Those with an asterisk (*) are advertised in this issue.]

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which revail at the present time, prices of materials hould be confirmed by inquiry.]

Wood prices have been advanced and several prices revised.—ED.

** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices —a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
Best Stocks	2	0	0
Picked Stocks for Facings	2	12	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
Flettons	1	10	0	Best Blue Pressed Staffordshire	5	0	0
Best Fareham Red	3	12	0	Do. Bullnose	5	5	0
Best Red Pressed Ruabon Facing	5	5	0	Best Stourbridge Fire Bricks	4	15	0

GLAZED BRICKS—

	£	s.	d.		£	s.	d.
Best White, Ivory, and Salt Glazed Stretchers	13	7	6	D'ble Str'tch'rs	18	17	6
Headers	12	17	6	Double Headers	15	17	6
Quoins, Bullnose and 4½ in. Flats	16	17	6	One Side and two Ends	19	17	6
				Two Sides and one End	20	17	6
				Splays and Squints	18	7	6

Second Quality £1 per 1,000 less than best.

	s.	d.	
Thames Ballast	8	3	per yard, delivered.
Thames and Pit Sand	8	6	„ „ „
Best Washed Sand	9	6	„ „ „

Per ton, delivered.

	£	s.	d.		£	s.	d.
Best Portland Cement	2	5	0	..	2	8	0

Do. £2 1s. alongside in 80-ton lots.
Ferrocrete 2s. 6d. per ton extra on above.
Best Ground Blue Lias Lime .. 1 5 6 at rly. depôt.

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime .... 18s. 0d. per yard delivered.
Stourbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1	7
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1	8¾
Do. do. delivered on road waggons, at Nine Elms Depôt	1	9¾

PORTLAND STONE—

	s.	d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W.R., per ft. cube	2	5¼
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½

White basebed, 2d. per ft. cube extra.

RANDOM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
ancaster in blocks	2	0	Closeburn Red Freestone	2	2
Beer in blocks	1	7½	Red and White Mansfield Random block	2	9
Grinshill in blocks	2	4	Yellow Magnesian Limestone do. do.	3	3
Darley Dale in blocks	2	5			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
in. sawn two sides landings to sizes (under 40 ft. super.)	2	5
in. rubbed two sides, ditto	2	8
in. sawn two sides slabs (random sizes)	1	0½
in. to 2½ in. sawn one side slabs (random sizes)	0	8½
½ in. to 2 in. ditto, ditto	0	6¾

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
in. sawn two sides landing to sizes (under 40 ft. super.)	2	3
in. rubbed two sides ditto	2	7
in. sawn two sides slabs (random sizes)	1	0
in. self-faced random flags	0	5

TILES.

Per 1,000 f.o.r. London.

	£	s.	d.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2	12	6
Ornamental ditto	2	15	0
Hip and valley tiles (per dozen)	0	5	6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£	s.	d.
Best Blue Bangor Slates, 20 by 10	11	16	0
First quality „ „	11	10	0
„ „ 16 by 8	5	15	0
Best Blue Portmadoc, 20 by 10	11	13	6
First quality „ „	11	3	6
„ „ 16 by 8	5	15	0

WOOD.

BEST BUILDING REDWOOD. Nominal. Imported sizes. Per standard.

	£	s.	d.		£	s.	d.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	35	0	0	..	36	0	0
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	34	0	0	..	35	0	0

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

	£	s.	d.		£	s.	d.
Battens: 2 in., 2½ in., and 3 in. by 8 in.	33	0	0	..	34	0	0
2 in., 2½ in., and 3 in. by 7 in.							
2 in., 2½ in., and 3 in. by 6 in.							
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.							
3 in. by 4 in., and 3 in. by 4½ in.							
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0				
Seconds	1	0	0	less than best			
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	10	0	0	..	—		

Per load of 50 ft. cube. Stocks very limited.

	£	s.	d.		£	s.	d.
Sawn pitch pine logs (about 35 cu. ft. average) *(Per load.)*	13	0	0	..	14	0	0
Do. 6 in. to 10 in.	11	0	0	..	12	0	0
Per standard.							
Best Pitch Pine Deals	35	0	0	..	36	0	0
Under 2 in. thick	0	10	0	extra.			

JOINERS' WOOD.

	£	s.	d.		£	s.	d.
White Sea First Quality Red: 4 in. by 11 in.	40	0	0	..	41	0	0
3 in. by 11 in., and 2 in. by 11 in.	39	0	0	..	40	0	0
4 in. by 9 in.	38	0	0	..	39	0	0
3 in. by 9 in., and 2½ in. by 9 in.	37	0	0	..	38	0	0
9 in. by 11 in. boards	1	0	0	more than deals.			
7 in. and 8 in. battens	34	0	0	..	35	0	0
7 in. and 8 in. boards	1	0	0	more than battens.			
Archangel White Deals— Best 3 in. by 9 in. and 10 in. and 11 in.	37	0	0	..	38	0	0
Seconds, do.	2	0	0	less than best.			
U.S. Battens	31	0	0	..	33	0	0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

Per square actual.	£	s.	d.		£	s.	d.
1¼ in. by 6½ in. planed and shot	1	16	0	..	1	19	0
1¼ in. by 6½ in. planed and matched	1	16	6	..	1	19	6
1 in. by 6½ in. planed and shot	1	9	0	..	1	12	0
1 in. by 6½ in. planed and matched	1	9	6	..	1	12	6
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1	4	0	..	1	6	0
1 in. by 6½ in. do.	1	10	6	..	1	12	0
Per standard.							
Columbian or Oregon Pine, best quality	42	0	0	..	44	0	0
Yellow Pine—First, regular sizes	57	0	0	upwards.			
Oddments	39	0	0	„			
Seconds, regular sizes	43	10	0	„			
Oddments	37	10	0	„			
Kauri Pine—Planks per ft. cube	0	8	0	..	—		
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super, as inch.	0	1	0	..	0	1	3
¾ in. do. do.	0	0	10	..	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0	1	0	..	0	1	4
Cuba Mahogany	0	1	6	..	0	2	6
Dry Walnut, American, per ft. super, as inch	0	1	0	..	0	1	3
French, "Italian," Walnut	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

In London or delivered Railway Vans, per ton.

	£	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	20	0	0	..	21	0	0
Plain Compound Girders, ordinary sections	22	0	0	..	23	0	0
Plain Compound Stanchions	23	0	0	..	24	10	0
Angles, Tees, and Channels, ordinary sections	20	10	0	..	21	10	0
Flitch Plates	20	10	0	..	21	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	13	10	0	..	14	0	0

(Turning extra.)

WROUGHT-IRON TUBES AND FITTINGS—

Discounts off Association Prices.

	Tubes. Per Cent.	Fittings. Per Cent.
Gas at works	55	57½
Water „	50	55
Steam „	45	52
Galvanised gas at works	30	47½
„ water „	23¾	45
„ steam „	17½	42½

Ex London 2½ per cent. less than above.

L.C.C. SOIL PIPE— London Prices.

	Pipes Coated. s.	d.	Bends. s.	d.	Branches. s.	d.
2 in.	2	4	1	8	2	0
2½ in.	2	9	1	10	2	6
3 in.	3	5½	2	0	3	0
3½ in.	3	9¾	2	6	3	6
4 in.	4	1½	2	10	4	0

RAIN-WATER PIPES, ETC.— London Prices.

	Pipe. s.	d.	Bends. s.	d.	Branches. s.	d.
2 in.	1	8½	0	11	1	3
2½ in.	1	10½	1	1	1	6
3 in.	2	2¼	1	4	2	0
3½ in.	2	8½	1	7	2	4
4 in.	2	10¾	1	11	2	10

METALS (*Continued*).

L.C.C. DRAIN PIPES— London Prices.
4 in., 4s. 1d. .. 5 in., 4s. 10d. .. 6 in., 5s. 11d.

Per ton, in London.

IRON—	£	s.	d.		£	s.	d.
Common Bars	16	0	0	..	—		
Staffordshire Crown Bars, good merchant quality	16	0	0	..	17	0	
Staffordshire "Marked Bars"	17	10	0	..	18	0	
Mild Steel Bars	18	0	0	..	18	10	
Steel Bars, Ferro-Concrete quality, £18 basis price.							
Hoop Iron, basis price	20	0	0	..	20	10	
„ „ Galvanised	33	0	0	..	—		
(* And upwards, according to size and gauge.)							
Sheet Iron Black— Ordinary sizes to 20 g.	20	10	0	..	21	0	0
„ „ 24 g.	21	10	0	..	22	0	0
„ „ 26 g.	22	10	0	..	23	0	0
Sheet Iron, Galvanised flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31	0	0	..	—		
Ordinary sizes to 22 g. and 24 g.	31	10	0	..	—		
Ordinary sizes to 26 g.	34	0	0	..	—		
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	33	0	0	..	—		
„ „ 22 g. and 24 g.	33	10	0	..	—		
Ordinary sizes to 26 g.	36	10	0	..	—		
Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 8 ft. 20 g.	29	0	0	..	—		
Ordinary sizes, 22 g. & 24 g.	29	10	0	..	—		
Ordinary sizes, 26 g	30	0	0	..	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23	10	0	..	—		
Best Soft Steel Sheets, 22 g. and 24 g.	23	15	0	..	—		
Best Soft Steel Sheets, 26 g.	25	10	0	..	—		
Cut Nails, 3 in. to 6 in.	24	0	0	..	25	0	0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

	£	s.	d.		
LEAD—Sheet, English, 4 lb. and up	40	10	0	..	—
Pipe in coils	41	0	0	..	—
Soil pipe	44	0	0	..	—
Compo pipe	44	0	0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£	s.	d.		
COPPER— Strong Sheet	per lb.	0	1	6	..	—
Thin „	„	0	1	8	..	—
Copper nails	„	0	1	6	..	—
Copper wire	„	0	1	8	..	—
BRASS— Strong Sheet	„	0	1	6	..	—
Thin „	„	0	1	8	..	—
TIN—English Ingots	„	0	1	11	..	—
SOLDER—Plumbers'	„	0	0	11	..	—
Tinmen's	„	0	1	2	..	—
Blowpipe	„	0	1	4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
„ fourths	4¾d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	„ fourths	7½d.
„ fourths	5¾d.	Fluted Sheet, 15 oz.	5¼d.
26 oz. thirds	7d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
$\frac{3}{16}$ Rough rolled and rough cast plate	4¼d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	2
„ „ „ in barrels	„	0	3	3
„ „ „ in drums	„	0	3	6
Boiled „ „ in barrels	„	0	3	5
„ „ „ in drums	„	0	3	9
Turpentine in barrels	„	0	3	8
„ in drums	„	0	3	11
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		58	0	0
Red Lead, Dry	per ton	58	0	0
Best Linseed Oil Putty	per cwt.	0	12	0
Stockholm Tar	per barrel	4	5	0
Filocol	per cwt.	0	9	6
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	70	0	0

VARNISHES, &c.

Per gallon.

	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

PATENTS.

APPLICATIONS PUBLISHED.*

10,849 of 1914.—Reginald John Webber Parsons: Method of jointing as applied to the construction of reinforced concrete floors, walls, roofs, partitions, divisions, and all similar structures.

3,560 of 1915.—Henry Pearson and John Renfrew: Adjustable hinges.

6,307 of 1915.—George Powis: Slabs or blocks for ceilings, walls, and wall coverings, or plating.

6,319 of 1915.—John Alfred Davenport: Reinforced concrete structures and reinforced concrete construction.

7,079 of 1915.—Antoine Dujardin, Leon Lootens, and August Verraert: Concrete structures.

7,306 of 1915.—John Lowry: Concrete fence and like posts.

7,342 of 1915.—Herbert George Smith: Method of and apparatus for coating cornice poles and other elongated bodies.

7,393 of 1915.—Hugo Van de Loo and Erven de Gruyter (firm of): Apparatus for adding a disinfecting liquid to the flushing water for wash-out closets.

7,547 of 1915.—George William Payne: Apparatus for supporting stretchers on vehicles used in mines.

7,577 of 1915.—John Shanks: Water closets.

8,902 of 1915.—Alexandre Hanssens: Apparatus for forming boreholes in soft and loose sand or other loose and soft strata.

9,063 of 1915.—Matthew Coleman: Locking and unlocking devices for railway carriage windows.

9,681 of 1915.—Alexander Peacock and Arthur Peacock: Woodscrews.

9,966 of 1915.—Hugo Duncker and Mathias Edvin Udd: Concrete buildings in which filling materials are used.

10,271 of 1915.—George Edgar Hill Woods: Method of and apparatus for dressing stone.

11,310 of 1915.—Albert Matthews: Seats.

13,748 of 1915.—Charles Brent: Fire-extinguishing apparatus.

13,802 of 1915.—Sorabji Muncherji Rutnagur: Means for ventilating buildings.

13,833 of 1915.—Frederick Pollard: Bench stop for joiners' or wood-workers' benches.

13,896 of 1915.—Emil Kanturek: Pay plate or table.

14,702 of 1915.—Alexander Milne and William Henry Theed: Method of and means for locking nuts to bolts.

14,934 of 1915.—George Durham and Charles William McQuirk: Apparatus for cleaning surfaces.

15,979 of 1915.—Charles Needham Forrest and Barber Asphalt Paving Company: Refining asphalt and the manufacture of asphalt cements from natural asphalts.

16,111 of 1915.—Justin Prétot and Jules Louis Breton: Apparatus for cutting barbed wire and the like.

16,460 of 1915.—Clayton & Shuttleworth, Ltd., Philip Warwick Robson and Francis James Bretherton: Combined filter and plug cock.

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* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

LONDON.—For creosoting wood-paving blocks for a period of six months, for the Westminster City Council:—

Alexander Bruce & Co.,‡ land *ex* barge, creosote with not less than 10 lb. per cubic ft., and reload into barge, 25s. per load of 50 cubic ft.; lighterage of creosoted blocks to riverside wharf, below Chelsea Bridge, 2s. 9d. per load, minimum 80-ton barge loads, demurrage 20s. per day; creosoting under the Ruping process, 20s. per load.

‡ Recommended for acceptance.

LONDON.—Accepted by the Westminster City Council for the supply of wood blocks for jobbing repairs:—

Arnold & Sons, about 5,000 3-in. by 5-in. by 7-in. and 3-in. by 6-in. by 7-in. blocks at £10 10s. per 1,000, f.o.r., £52 10s.; cartage from railway terminus at about 6s. 6d. per 1,000, about £1 12s. 6d. Approximate cost, £54 2s. 6d.

Lauder & Co., 40,000 3-in. by 5-in. by 9-in. blocks at £18 17s. 6d. per 1,000, f.o.r., £755; cartage from railway terminus at about 6s. 6d. per 1,000, about £13. Approximate cost, £768.

Approximate total cost, £822 2s. 6d.

STOCKPORT.—For the conversion of offices at Adswood sidings into horsekeeper's apartments, for the Stockport Industrial and Equitable Co-operative Society, Ltd. Messrs. Wrathmell & Blackshaw, architects, St. Peter's-square:—

C. Walker	£240
W. B. Beattie	219
Daul, Eadie, & Co., Ltd.*	200

[All of Stockport.]

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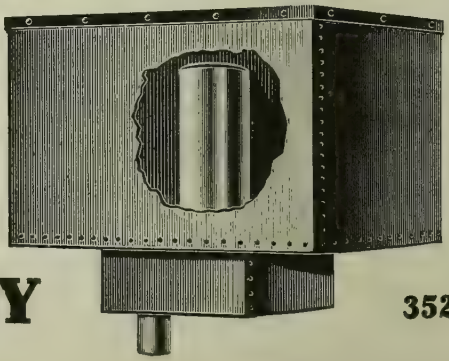

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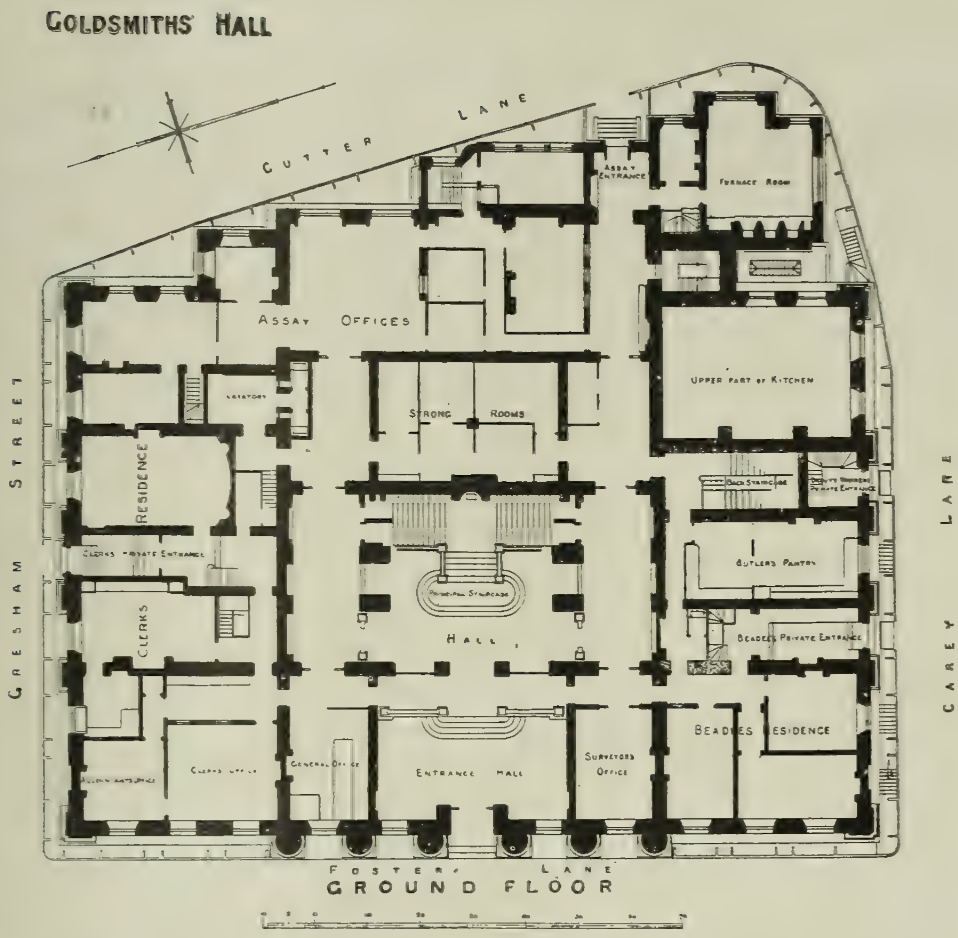
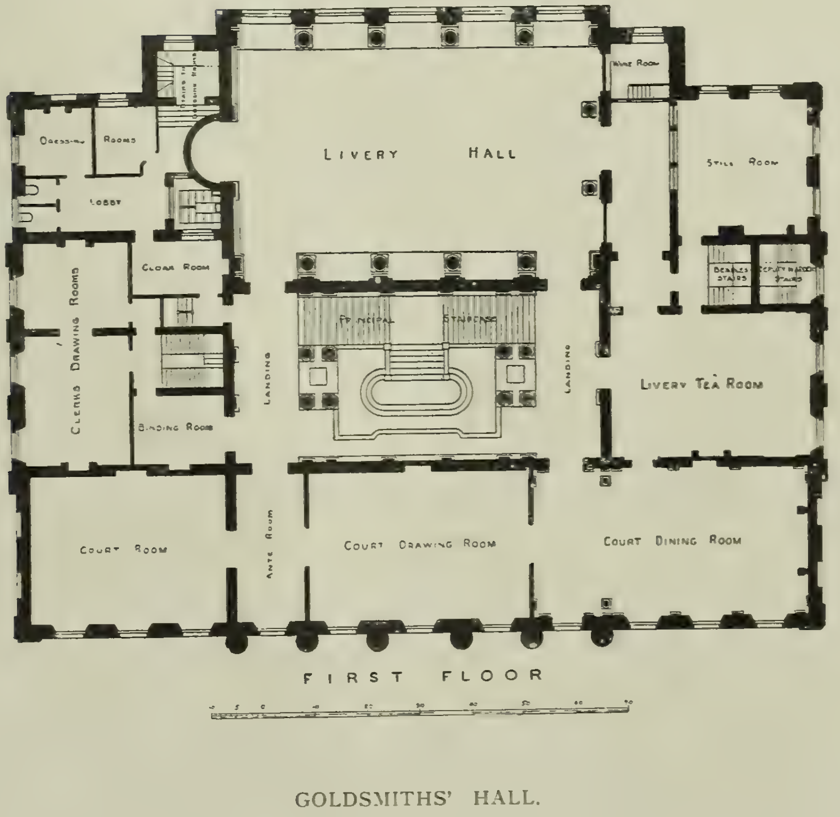
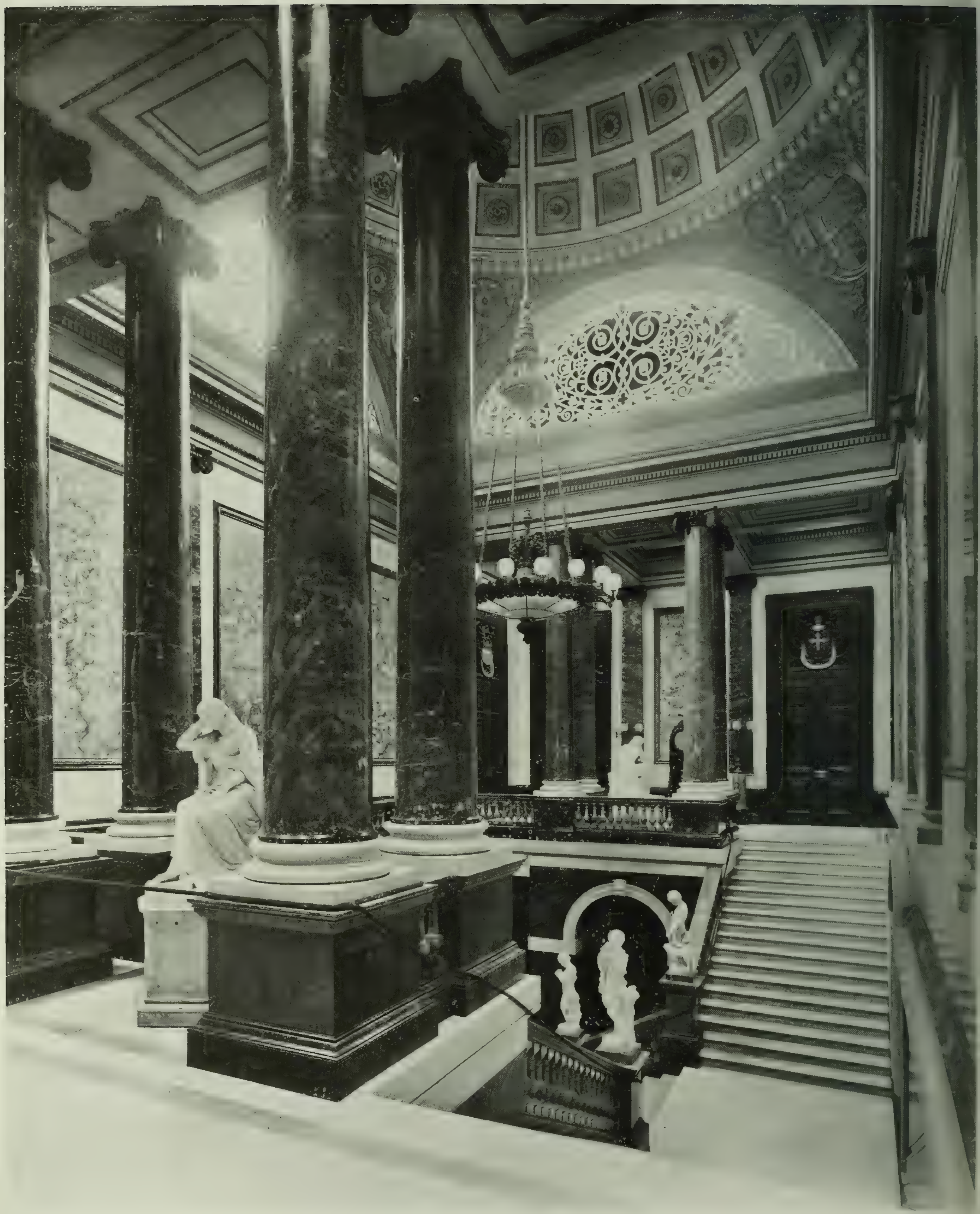




GOLDSMITHS' HALL.



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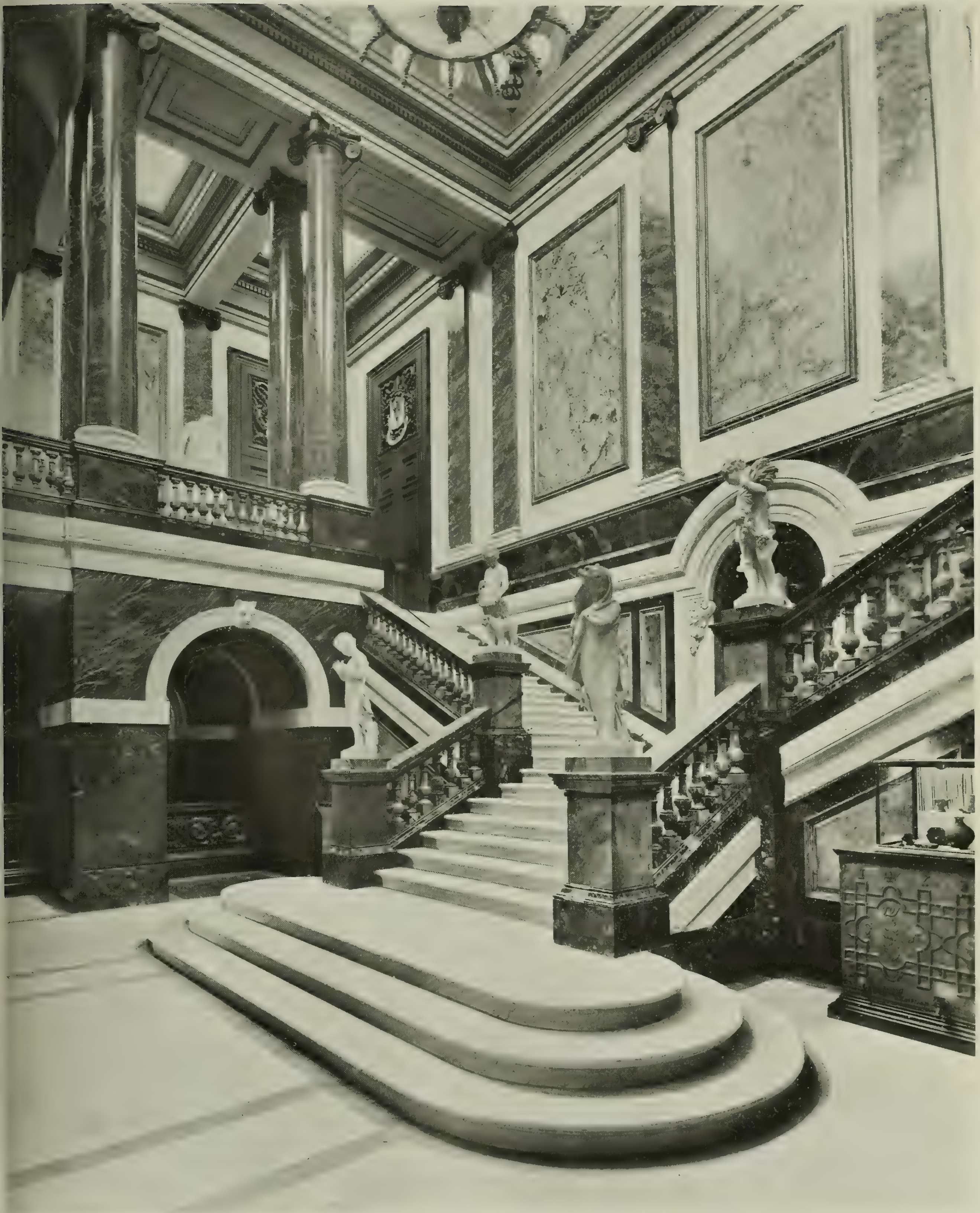

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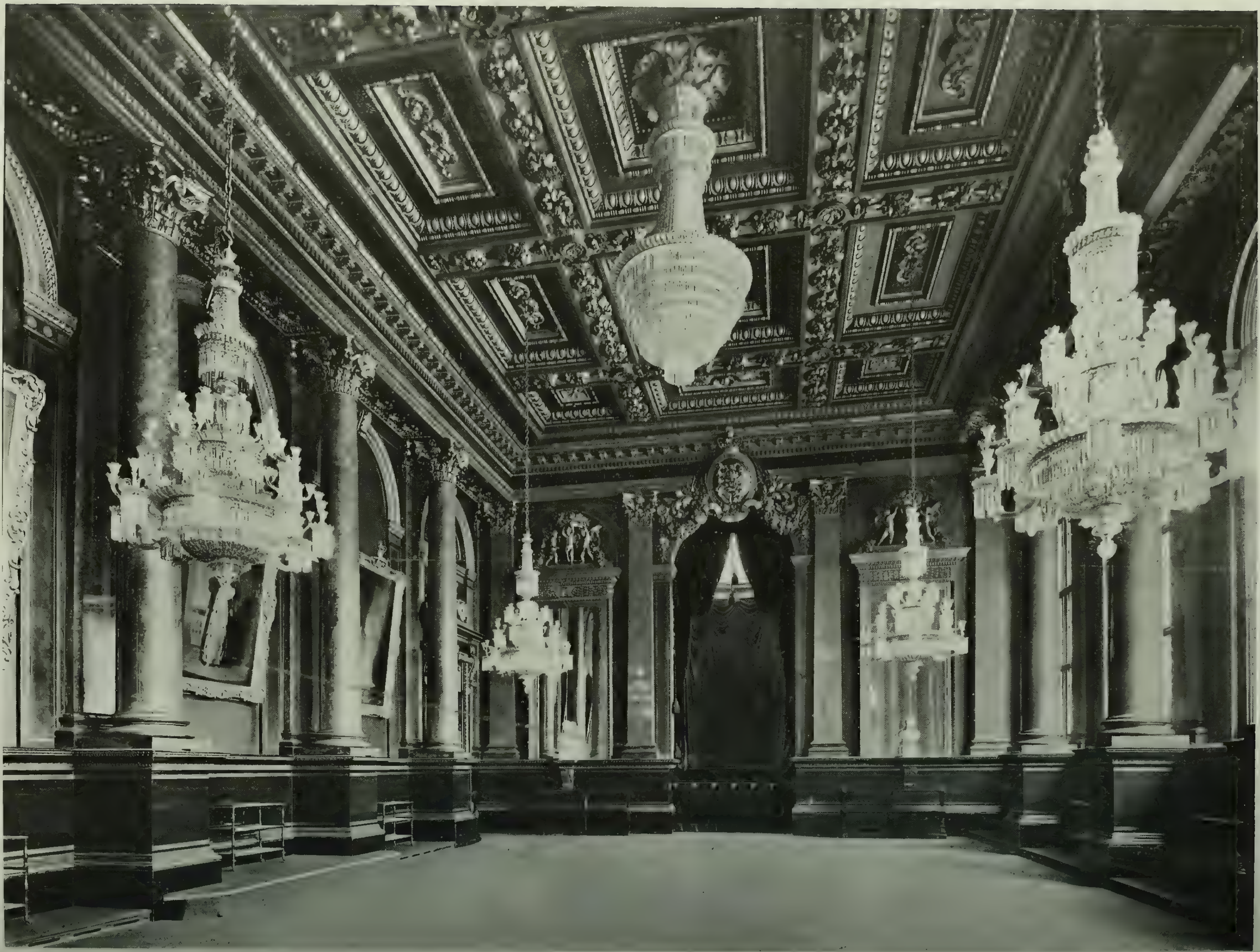

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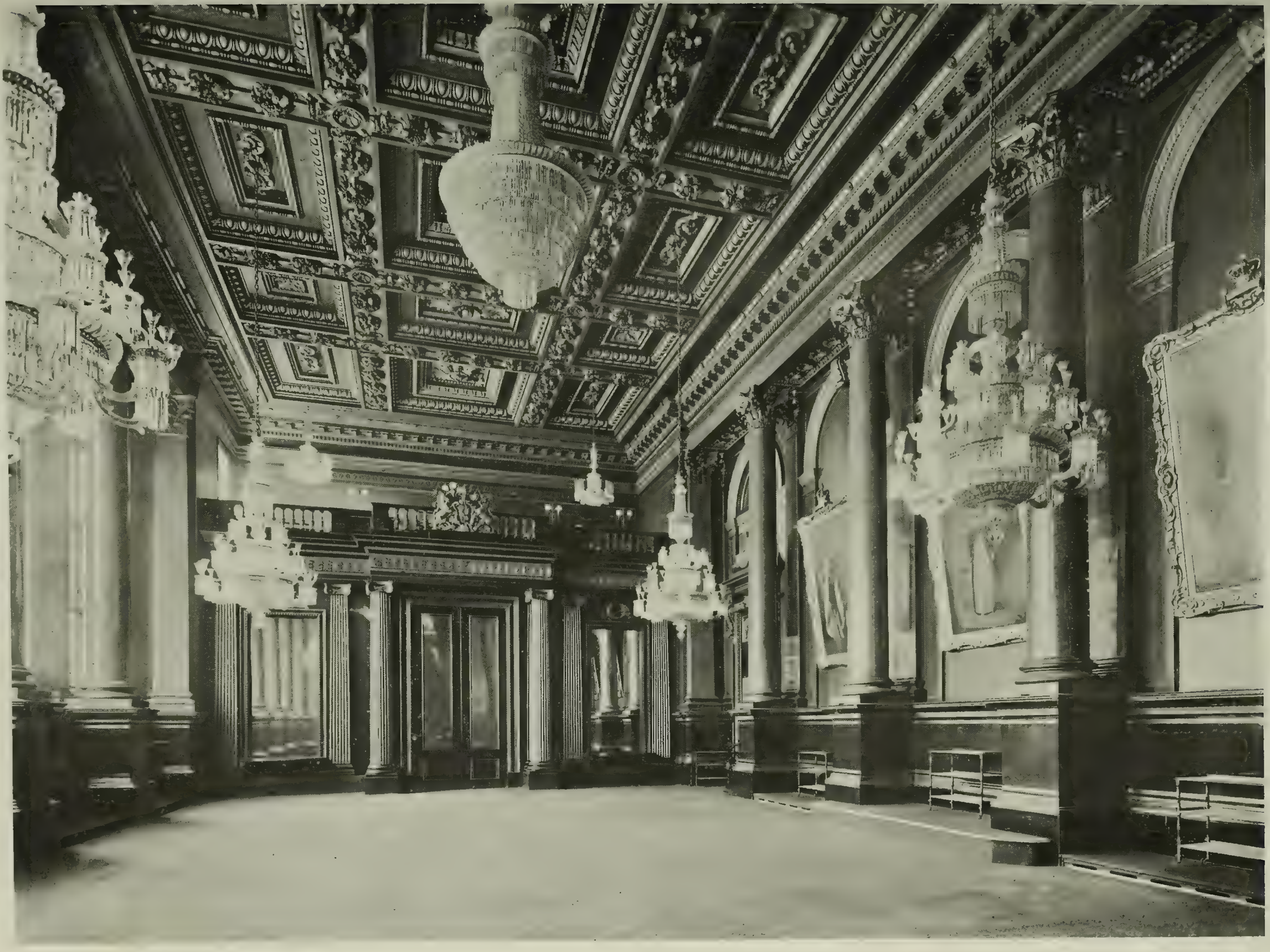

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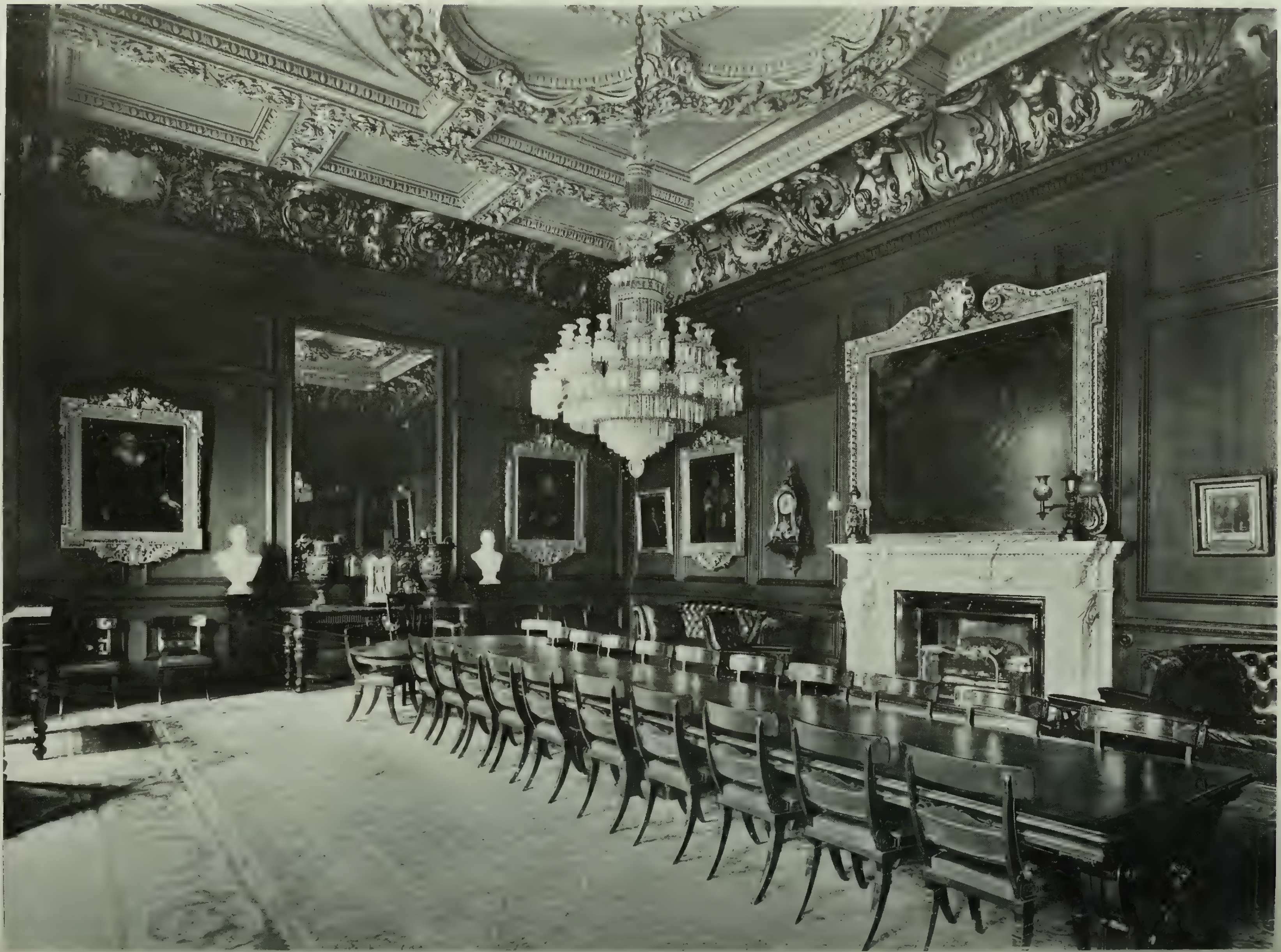

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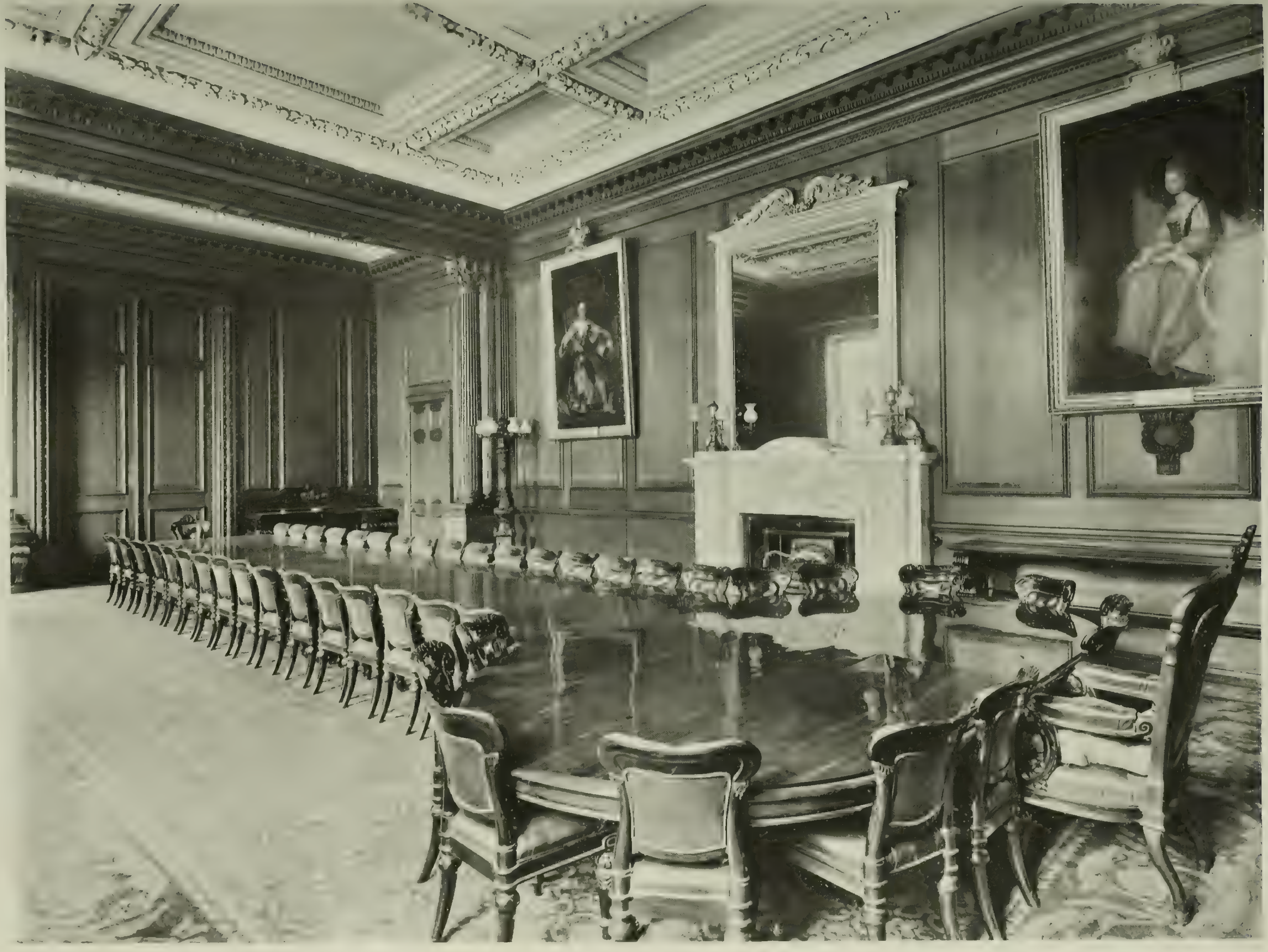

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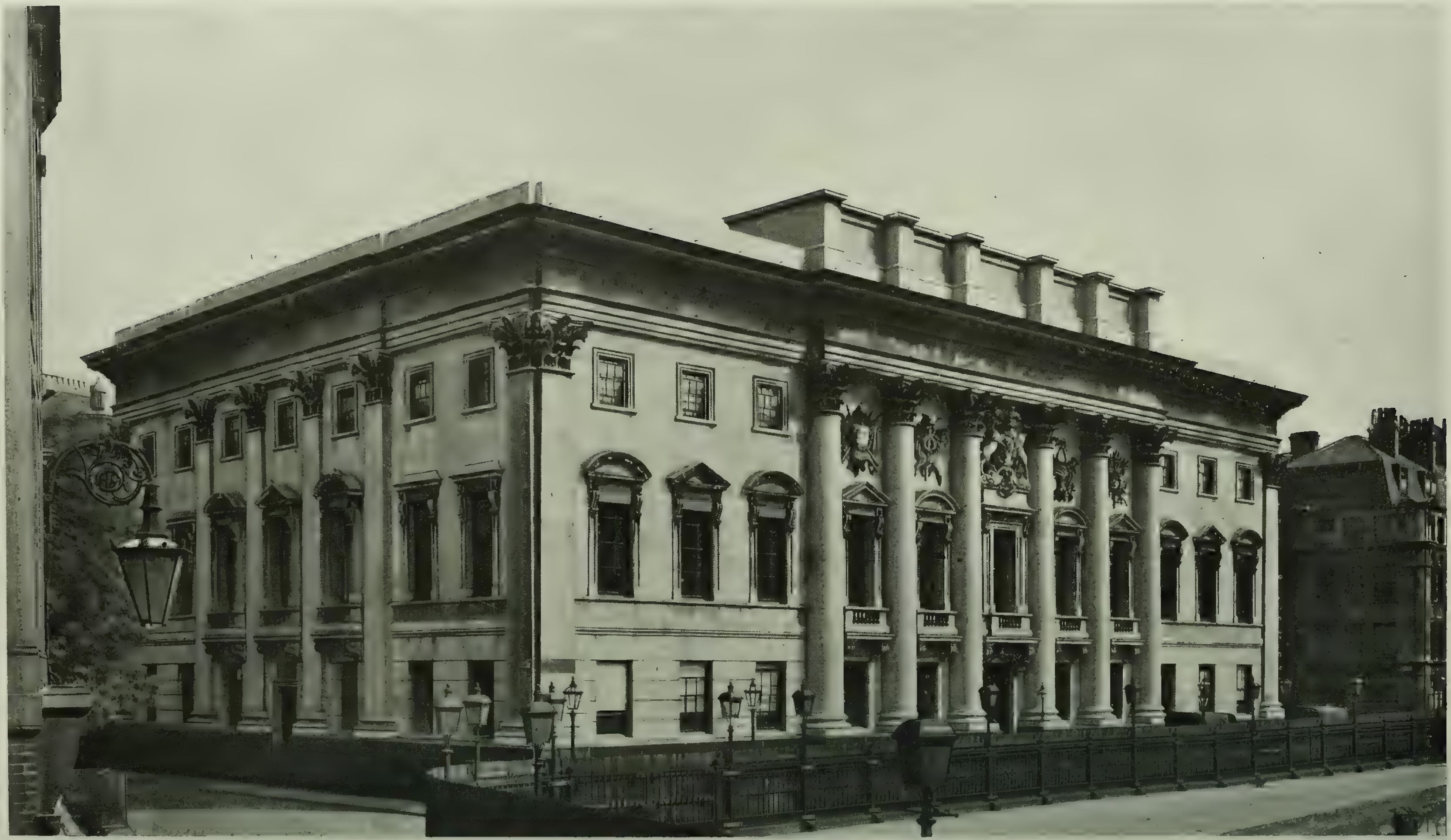

GOLDSMITHS' HALL: EXTERIOR VIEW.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3828. JUNE 16, 1916.

THE PERIODIC TIDES OF STYLE.

ARCHITECTURE, though described by Ferguson as the history of civilisation written on stone, does not necessarily reflect the general progress of civilisation with exactness, rather following a course of its own influenced by contemporary ivilisation, but showing a tendency to ebb and flow from eriod to period. Civilisation, if judged from the broadest tandpoint of the diffusion of knowledge, humanitarian coneptions, and the increase of wealth of the community, does ot to any marked extent ebb and flow unless disturbed by ome world calamity in the shape of war or pestilence. In one ountry the manifestations of art show few signs of mutation hrough an epoch of something like four thousand years, for in gypt the work of the Ptolomies is closely similar to that of the haraohs, though in the later epoch the influence of Rome had ransformed the conditions of the ancient world. The spell of he East and the traditions of the past proved a barrier which tilled the waters which ran so strongly elsewhere, and the emples of Philæ and Edfou reflect a past rather than a conemporary stage in the world's history. Elsewhere the power f Rome and the conditions of Roman civilisation were tamped on the civilised world to a great extent regardless of ocal traditions, climate, or site. Nor did Roman architecture ndicate the gradual decay of a virile, hardy people, but showed hroughout its long history the same clear evidence of contructional ability and a masculine purpose. Many of the ater Roman buildings contain the germs of conceptions carried o fruition in the age of the Renaissance, but the vitiation of olitical and national life is by no means strongly marked in ny series of Roman buildings.

If we except from our survey Rome and Egypt, where rchitecture would seem to have been more unchanging than he civilisations of which it was an outcome, we are confronted ith the periodic waxing and waning of the " styles " for the ast nineteen hundred years, though in that period the nations of urope have been, with occasional set-backs, evolving a higher nd more complicated from a lower and more elementary stage f civilisation. After the long period when the struggles of urope to repair the disaster of the overthrow of the Roman mpire were fittingly expressed in Romanesque architecture, e have the amazing spectacle of the rapid growth, developnent, and decay of Gothic art, all comprised within a period f some three centuries, certainly the most astonishing in the hole history of æsthetic development. If architecture was parallel development to contemporary civilisation, we should xpect to see contemporary civilisation take some new form, s artistic expression did during those three centuries, but the istory of the countries in which it waxed, waned, and disppeared beneath the rising flood of the Renaissance exhibits o such sudden change. From the time of Henry II. to that f Henry VII. we were slowly progressing towards better hings, but the process was but part of that gradual rise from more primitive to a more complex civilisation which has one on for centuries. The Black Death which halved the opulation of Western Europe was marked in England and rance by a cessation of building which formed the starting-oint of the development of Perpendicular and Flamboyant rt; but the changed manner, noticeable as it was, is slight ompared with the influences unloosed by the Renaissance hroughout Europe.

Only in Italy, whose soil covered the ruins and remains of ncient Rome, and where the instincts of the people rendered he new change more of a reversion to a familiar type than an nnovation, was the movement anything less than a revoluionary one, but a revolution we should scarcely gather from the history of the times were our historic monuments effaced. And with every succeeding period since that of Elizabeth and James we have seen the tides of æsthetic feeling ebbing and flowing sometimes in one direction and sometimes in another, and yet all the time our people have been gradually winning their way towards the conditions of life now obtaining in the civilised world. And what can be said of the æsthetic conditions which have marked the last century, one in which we have opened the casket of the art treasures of centuries, an age in which we have acquired knowledge, but fail in the ability to build as our forefathers did when they produced the things of beauty which are " a joy for ever " ? Is the history of civilisation necessarily written on stone, or is it subject to tidal influences, which are things apart from civilisation, as the history of the world has partially demonstrated to us?

A study of every history of architecture written brings these questions freshly to our mind, and the last two volumes which complete Russell Sturgis's " History of Architecture " * suggest the same reflections. Mr. Frothingham brings to his task great knowledge and industry, but his books are perhaps happily more descriptive than analytical. We have heard the theorists on architecture of one age discounted in the next, and possibly the greatest service a writer can do is to encourage study by promoting enthusiasm rather than by explaining his own gospel to a world which may soon discard him in favour of a later prophet. For when Mr. Frothingham says, " It is unimportant to know who built a Gothic cathedral; it is the work rather of an era than a man. But it is absolutely imperative to know who built a Renaissance palace. Art biography is now to overshadow art history," he is using meaningless rhetoric. What is important in either case, if we can obtain it, is a knowledge of the intention and aims of the builder, and a Renaissance palace can be analysed as a work of architecture in precisely the same way that a Gothic cathedral can be.

That we study the biographies of the Renaissance architects is due to the fact that the information is available and interests the large body of those to whom the personal equation is always fascinating. The great and absorbing problem concerning mediæval architecture is the extent to which it was the outcome of a master mind and the degree to which it can be attributed to a republic of craft workers. The case for the independence of collective workers would seem, save in very early times, to be a slighter one than we have formerly been inclined to think, for we have numerous instances, like the spire of Ulm Cathedral,† finished in our times from drawings which have come down to us from the Middle Ages and Ratisbon, where there is evidence that the final design was a selection from several made in competition. These tend to make us think the necessity of direction was felt and acknowledged in the past as in the present. In another sentence we are told that " as inertia is much simpler in its manifestations than action, the forms and norms of the Renaissance were as simple and stable as those of Gothic were complex and fluid." We question whether a statement of this kind will pass muster with those who look through Mr. Frothingham's last volume and reflect on the amazing variety and complexity of the forms assumed by the Renaissance in different ages and countries.

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* " A History of Architecture." Vols. I. and II., by Russell Sturgis, A.M., Ph.D. Vols. III. and IV., by A. L. Frothingham, late Professor of Archæology and the History of Art at Princeton University. (Doubleday, Page, & Co., Garden City, New York. 25s. each volume.)

† See our inset illustration this week.—ED.

Such argument is vitiated by the fact that it is based on the Gothic cathedral, not on Gothic architecture as a whole—that is to say, on a special type of building produced in the Middle Ages, and does not apply to other manifestations of architectural expression.

But the value of the work lies in its comprehensive scope, covering as it does the mediæval and Renaissance architecture of all Europe, and illustrated by nearly 900 illustrations. The immense difficulties of writing such a work appear to be fairly well met, but a survey of any history of architecture renders the reader more and more uncertain as to whether mankind's æsthetic development will ever enable us to reach firm standing-ground beyond the influence of that ebb and flow of style which is conterminous with the limits of European history if not with that of the world. We hope that such may be the case, but precedent hardly points in that direction.

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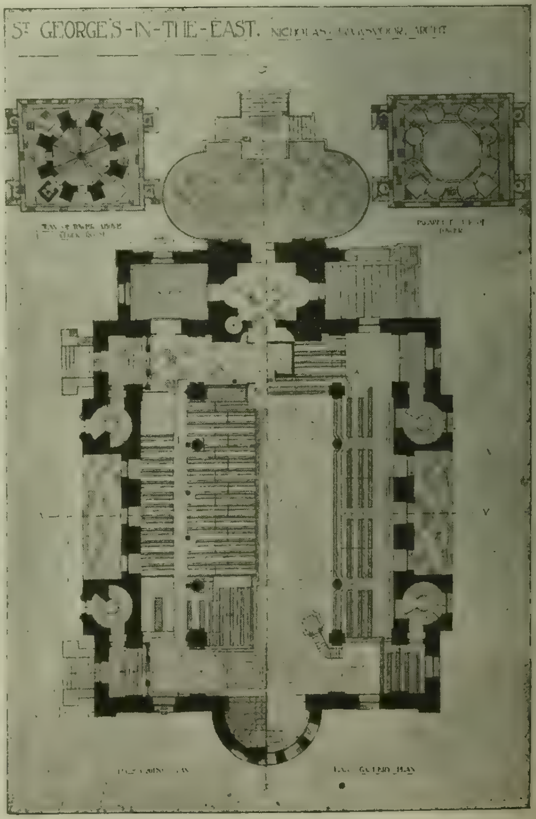
NOTES.

School of Oriental Studies, London Institution. THE King in Council has granted a Charter of Incorporation to the School of Oriental Studies, London Institution, and the Governing Body, of which Sir John Hewett has been appointed Chairman, is constituted. For purposes of the School the buildings of the London Institution in Finsbury-circus have been altered and adapted and a new wing has been added after the plans and designs of Professor F. M. Simpson, F.R.I.B.A., who acted as architect to a Departmental Committee of the India Office in conjunction with H.M.'s Office of Works. The Government Bill, promoted in May, 1912, provided for the vesting of the buildings in the Office of Works, compensation to the proprietors of the Institution, a grant of from £20,000 to £25,000 for alterations of the premises, and an annual subsidy of £4,000 in aid of maintenance. The Indian Government promised a similar grant of £1,250. The Institution was built in the then Amphitheatre, Moorfields, in 1819-20, after designs by Mr. William Brooks, who adapted the Corinthian portico from the Temple of Vesta at Tivoli; the laboratory was designed by W. H. Pepys, F.R.S. The library on the first floor was one of the finest after its kind in London.

Nonsuch Palace. THE sale in the current month of the Ewell Castle Estate embraces the ruins of Nonsuch Palace that stand in the grounds. The palace was begun in 1530 by Henry VIII., who used the materials of Merton Priory, and, for the site and park, appropriated all Cuddington parish, with its manor house and church; it was finished by Henry, Earl of Arundel, by grant of Queen Mary I. The plan comprised an outer or "lower" court, 150 ft. by 132 ft. within, and an inner or "upper" court, 137 ft. by 106 ft. within, upon a higher level; between the two courts was a three-storied gate of freestone having angle-turrets and a lead-covered clock tower; the lanterns of the two great south-eastern and south-western embattled towers were also covered with lead, and in the latter was a big leaden cistern, pipes from which served the whole house. The outer two-storied court was of freestone; the inner, containing the State-rooms, was for the most part timber-framed. The exterior walls were covered with bas-reliefs in plaster. Of that splendid structure, the "Nulla Ejusmodi," there are views by Hoefnagel (1582) in Braun and Hogenberg's "Urbium Præcipuarum Mundi Theatrum," and by J. Hondius (1610) in Speede's "Survey."* Hentzner, who visited England *temp.* Elizabeth, describes the palace and its no less remarkable gardens, with their "piramedes," "wash-boule," "perches" (for falcons), and "six leylack-trees"—the first lilac-trees seen in England. In the survey made for the Commonwealth the materials are valued at £7,020. The palace, which was settled upon the Queens Anne and Henrietta Maria, was bestowed by Charles II. upon Barbara, Duchess of Cleveland, who sold the materials, which became a quarry for Durdans and other houses at Epsom Wells. Thomas Calverley built Ewell Castle about 100 years ago, and Capt. Wiener, who recently bought the freehold, expended large sums in making the Japanese lake-gardens.

The Chelsea Physic Garden. THE Managing Committee have added the Physic Garden, Chelsea, to the list of London gardens which are now opened to our wounded soldiers. The garden was handed over in 1899 to the trustees of the London Parochial Charities Foundation, who contribute £800 yearly towards its maintenance as a field for the study of botany and vegetable physiology and the culture of medicinal plants. The garden, 3½ acres in extent, has its origin in the parcel of land near the old Swan Tavern in Paradise-row, which the Apothecaries' Company leased from Lord Cheyne in 1673 for their botanical and summer garden and barge-wharf. Sir Hans Sloane—who bought Chelsea Manor in 1712—conveyed it by deed, dated February 28, 1721-3, in trust to the Apothecaries. Eventually the Company, finding their resources were unequal to the charge, applied to the Charity Commissioners, who framed (1899) the scheme now in force. About £7,000 has since been expended upon new laboratories, greenhouses, curators' residences, and other buildings. Evelyn records his visit on August 7, 1685, "to see Mr. Wats, Keeper of the Apothecaries' Garden of Simples at Chelsea." Watts planted in 1683 the four cedar-trees—the first after their kind brought to England—of which the last survivor was finally cut away a few years ago. Phillip Miller, author of the "Gardener's Dictionary," was chief gardener and curator for nearly fifty years. The marble statue (1737) of Sir Hans Sloane is by Rybrach, to whom the Company paid £300 for the work.

The Education of the Public. ACCORDING to a verse which appears in an evening contemporary the Teddy-bear and other children's favourites claim exemption from military service for the "architect" of dolls' houses. One of our most distinguished architects was anxious to give his daughter elementary instruction in design *ab initio*, so he devised a doll's house according to architectural canons and had it made at considerable cost. But his daughter would have none of it and clamoured for the commercial article, with the result that her disappointed father came to the conclusion that mankind inherits not only original sin but original bad taste. Can anything show more clearly the want of education in architecture than the bestowal of the title architect on the makers of dolls' houses? We should like the law of the land to prohibit the sale of any doll's house or any Noah's ark which had not been designed by a member of the profession, and we should further agitate for the punishment of all those who made such designs for less than 5 per cent.! Only by some drastic measure of this kind can we hope to get things right at the outset, for the child is father to the man, and the disposition to accept the counterfeit for the real should be severely checked at once. We suggest the subject as one worthy of consideration to all those who are in authority in the kindergarten, if that somewhat Germanic word is still in use.



St. George's-in-the-East. (*See page* 433.)

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* See also the late H. W. Brewer's drawing, "Nonsuch Palace: a Restoration," in the *Builder* of January 27, 1894.

HE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

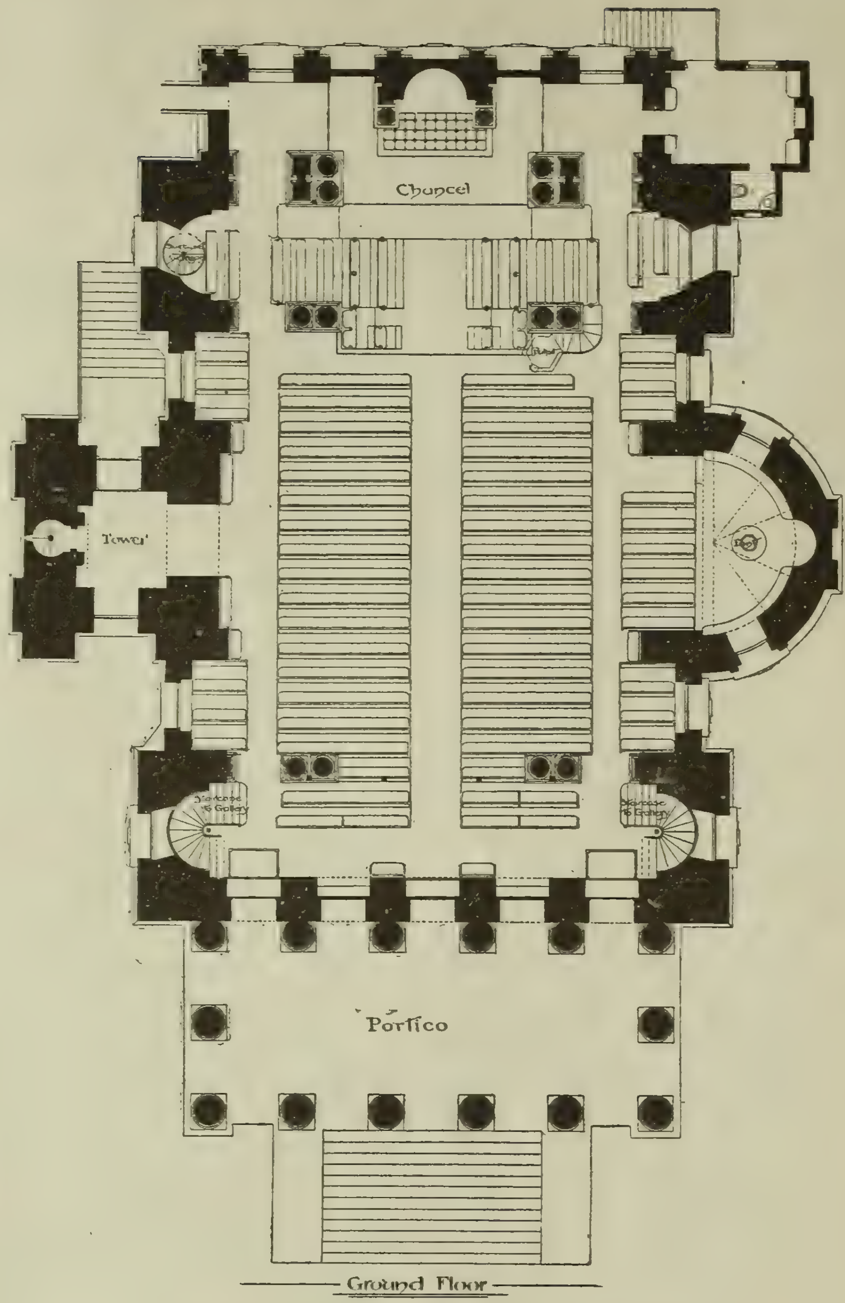
XXXIX. — St. George's, Bloomsbury-Square.

HE church of St. George, Bloomsbury-
are, was one of those entrusted to Nicholas
wksmoor (or Hawksmore) on his appoint-
nt as first surveyor to the Commissioners
building new churches, in which he was associ-
l with J. James in 1716. The church is heavy
somewhat uninteresting, though it possesses
siderable dignity. The altar was originally
ed in the semicircular recess in the east
l, and it is probable that it was intended to
end the church eastward after the demolition
adjacent buildings; but the orientation of
building has been altered, the chancel being
ed at the northern end. The steeple
sesses merits, and was inspired by Pliny's
ription of the mausoleum of Halicarnassus.
vas to have been surmounted by a statue of
rge of Denmark, the consort of Queen
ne, but the figure placed there eventually is
lited with being a representation of our
ional saint. The church was erected
reen 1720-30.

No. XL.—St. George's-in-the-East.

t. George's-in-the-East, formerly called
pping, Stepney, was built between 1715-23
n the design of Nicholas Hawksmoor, and
ws the overwhelming tendency of the designer
dopt massive forms and proportions. The
is an unfortunate addition which is not
haracter with the rest of the design. Four
ets mark the subordinate entrances, but
most remarkable feature in the church is
singular termination of the tower. The *motif*
clever one, but it has been spoilt in execution
the defect of heaviness and want of grace
ch mar the architect's design. The church
estimated to cost £13,570, but actually
£18,557. An excellent set of measured
wings of it were reproduced in the *Builder*
lay 28, 1915.

St. George's Church, Bloomsbury.



St. George's Church, Bloomsbury. (*See Inset Illustrations.*)

CHARING CROSS RAILWAY BRIDGE.

In a letter to the *Observer* Sir Aston Webb, R.A., writes as follows in reference to Charing Cross Railway Bridge:—

"The Bill came before the House of Lords this spring, and was referred to a Committee of the House, with the Marquis of Bristol as Chairman, the House of Lords passing a resolution, moved by Lord Plymouth, that it be an instruction to the Committee to take into consideration the requirements of the traffic over the river at this point and the effect that this Bill, if passed, will have upon it, and to hear evidence from the Royal Institute of British Architects, the London Society, and others on the treatment generally of this very important part of London. This Committee has just held its inquiry; the Bill was opposed, amongst others, by the Port of London Authority, the London County Council, and, under the instruction to the Committee, by the Royal Institute of British Architects and the London Society. The case for the company was that the old bridge required strengthening in order to allow of an increased traffic, while the London County Council and others asked that the powers be not given until a reasonable time had been allowed for the responsible bodies to bring forward an alternative scheme. It was explained by the engineer to the company that the strengthening of the old half of the bridge was to be carried out by propping it up from the underside, and large drawings were exhibited showing the result of this treatment on the appearance of the bridge.

The principal witness for further consideration was Mr. John Burns, who said he looked upon the bridge and station as an abomination which should never have been permitted, and that he thought everyone, including the company, would welcome its disappearance to the southern side. His view was that we ought to have a new station on the Surrey side, with a new vehicular bridge of the finest description connecting the north with the Surrey side, and that the London County Council, the two adjoining borough councils, and possibly the City Corporation ought to co-operate in providing it, and whilst carrying out a great public improvement, not to the company's detriment, but for the benefit of London as a whole, the Thames might be relieved of that ugly red oxide behemoth that sprawls from north to south. If the Bill was postponed for two or three years he and others, he said, would do all in their power to get the various authorities concerned to consider their attitude towards an alternative to this bridge, and suggested that the London County Council should co-operate with the railway company at once in devising a more excellent way of a bridge here and a station on the Surrey side.

Another witness, Mr. Andrew Taylor, Chairman of the Improvements Committee of the London County Council, said that while, of course, he could not pledge his Council, his Improvements Committee and the Council were unanimous—there being no dissentient vote—in deciding to oppose this Bill, and therefore he would take it upon himself to bring the matter forward, so that he might get authority to communicate with all the bodies concerned, together, he hoped also, with the Government and the railway company itself. In his opinion the time is now much more ripe than it has ever been for devising such a scheme. All he asked was that he should have a reasonable time after the war to bring their scheme to a focus.

A third witness, Sir William H. Lever, said he felt merely as a business proposition it was an entire mistake to spend money on the Charing Cross Bridge, not only from the point of view of the public, but also of the railway company. Land on the south side of the river is bound to become more and more valuable and more difficult to acquire. The proper and economical way is for the company to acquire it at once. He was perfectly certain that it is impossible to have an adequate station for Continental traffic on the restricted site of 4 acres at Charing Cross, and in his opinion we were quite behindhand in station accommodation in this country. He felt that any money spent, large or small, in patching up the present bridge was practically futile. In his view it was essential to have another road bridge at this point. The congestion of traffic in London is accountable for the extraordinary high rates for cartage in London, which are at least three times that of the dearest town he knew of.

The only other witness called under the instruction was myself, though we had in attendance, and would have liked to call on the traffic and other requirements, Mr. Paul Waterhouse, who has made a speciality of this matter, also Professor Beresford Pite and Mr. Leonard Stokes, on behalf of the Westminster City Council.

In Mr. Paul Waterhouse's view the intention to strengthen Charing Cross Bridge as proposed is wholly to be condemned. During its entire existence it has been an acknowledged blemish and is a definite and appreciable discount to the worth of our town. He considers the removal of the station and bridge inevitable, and that the congested state of the existing road bridges demands a vehicular and foot traffic bridge at this point. The inefficient gangway attached to the north-east side of the bridge is itself an anachronism and calls for reform, and the narrow footway and make-shift staircases should not be tolerated.

Professor Pite, of the Royal College of Art, holds similar views. He points out that a public bridge at this point would shorten the distance from Trafalgar-square to Waterloo by more than a third of the present distance by roadway, and that the north and south sides of London at its heart are separated by a great and exceptional length of unbridged river, that their retention of the present railway bridge makes such a junction of the north and south impossible, and that any money spent upon rendering permanent a structure which prevents the economic development of the south side is money badly spent.

In his opinion the bridge discredits its unique position and is an architectural disgrace to London, and does no honour to engineering design. He quotes Mr. A. J. Balfour, who on May 2, 1892, speaking at a Royal Academy banquet, said:—"I never walk along the Thames Embankment and study the proportions of Charing Cross Railway Station and the bridge which is appended thereto without feeling how monstrous it is that such things should be allowed and that there should be no power of dealing with them."

In my own evidence I urged similar views, that the bridge and station were entirely unworthy of their position, very unsightly and so poorly designed that the station roof has already fallen down, and a large sum is now asked for in order to strengthen one-half of the bridge. It seems impossible to make anything worthy of the present structure by patching it, and it is certain that no worthy improvements can take place at this most important point if the present bridge is retained, as it certainly will be if a large sum of money is now expended upon it.

I gave it as my opinion that a new road bridge at this point is essential, and that it would be an immense advantage. The Chairman of the Committee said he thought they were all agreed upon that, and he did not think there could be any question about it, and Lord Grimthorpe, another member of the Committee, said, "I think we should all like to abolish the bridge if we could." A suggestion for a new bridge prepared by Mr. Niven and Mr. Raffles Davison can now be seen at the Royal Academy.

In the end, however, their lordships passed the preamble of the Bill, and London is again threatened, unless it rouses itself at once with a renewed life, for this "oxide behemoth" is a permanent hindrance to all improvement in this the very eye and centre of London."

THE OPEN SPACES OF LONDON.

Mr. A. F. Buxton (Chairman of the London County Council) presided over a meeting of the London Society, held at the Royal Society of Arts, on June 7, when Mr. Lawrence Chubb gave a lantern lecture on "The Open Spaces of London—Past, Present, and Future."

The Chairman said it was remarkable what a development of feeling there had been within the memory of most of them with regard to open spaces in London. If they looked back thirty years, nobody cared very much about open spaces. They had got Hyde Park and Victoria Park, which was mostly a swamp, but still it was good enough, they thought. Then there came along the idea of opening some of the graveyards, which was an important development. The London County Council took the matter up and did some good work, but he doubted if London was yet fully alive to the immense importance of open spaces. The superintendent of one of their lunatic asylums told him it was his strong opinion that the development of open spaces in London had had an actual effect in the reduction of lunacy.

Mr. Lawrence Chubb said in Tudor times the pulse of growing London was gradually bursting through the narrow confines of the City wall, and an early view showed the old church of St. Paul looking out over the City at its feet beyond the ramparts to the green fields stretching away to the northern heights of Hampstead. Along the river, towards Westminster, a narrow ribbon of mansions and palaces was making an appearance, and here and there a church betrayed the first steps towards expansion. To check this unseemly growth Queen Elizabeth, by Proclamation, charged all persons to desist from the building of any houses within three miles of the gates of the City where no former house had been known to have been in the memory of such as were then living. In 1656 an Act was passed preventing the erection of houses within ten miles of the City; but the Act was more honoured in the breach than in the observance, for by 1700 the population of Greater London—extending to Uxbridge and Staines and Twickenham—had swollen to nearly three-quarters of a million. By 1800 the population had grown to a million, and Londoners must have needed facilities for healthful recreation. Their wants were supplied in the first place by the Royal parks—Hyde Park, St. James's Park, and Green Park—which had emerged out of the misfortunes of the monks of Westminster, forced by Henry VIII. upon the dissolution of the monasteries to surrender the greater part of their possessions. In the time of the Commonwealth Hyde Park had a narrow escape. It was sold by auction, and the most important part was sold to Anthony Dean for
£9,020. John Evelyn in his Diary complain
of the sordid fellow who had purchased it
the State charging a shilling for every coa
and sixpence for every horse using the Par
After the Restoration the parks came aga
into the hands of the Sovereign, and a conside
able area was appropriated by William I
to form the private grounds of Kensingt
Palace, much of which had happily been throw
open again as Kensington Palace Garden
Next in importance came the commons, whe
the humbler folk took their recreation, a
which rendered almost unnecessary t
provision of other open spaces. St. Leonard
Shoreditch, Hackney, Hornsey, Islingto
Kensington, St. George's-in-the-East, St. Gile
in-the-Fields, St. Giles Without, and St. Martin
in-the-Fields on the north side all had the
commons, whilst had the girdle of commo
on the south survived there would have bee
little need of an open-space movement f
London, and the local authorities would ha
been spared a vast expenditure. In additi
to the Royal parks and the commons the
existed village greens and butts, whilst the
were numerous privately-owned pleasu
gardens and wells, which attracted vast a
fashionable crowds. Of the gardens attache
to institutions of various kinds they had happi
retained as welcome lungs the grounds of t
Charterhouse, of the Foundling and Chels
Hospitals, and of the various Inns. T
public playgrounds of the present day mig
be classified in the following order:—(*a*) Roy
parks; (*b*) commons; (*c*) parks, recreati
grounds, ornamental gardens, and gymnasia
(*d*) disused burial grounds; and (*e*) squa
gardens. These breathing-spaces were inde
a goodly heritage, for in the Metropolit
Police district they comprised an area
approximately 25,000 acres. In London prop
—that was within the district controlled
the London County Council—the open spac
under the control of the local authoriti
amounted to 6,665 acres, or one acre of ope
space to every 678 inhabitants. When th
Royal parks were added the area was 8,16
acres. Perhaps the most striking point
connection with the movement was the fa
that practically none of the 575 open spac
dedicated to the public use and enjoyment
Greater London existed as such 100 years ag
It was true the public resorted to the common
but in the view of the law courts they we
there as trespassers, and the user for centuri
of Stockwell Green for the playing of games d
not suffice to save that land from falling int
the hands of the building speculator. By th
middle of the nineteenth century the soci
needs of the community began to receive th
earnest attention of reformers, and the nee
for the provision of recreation grounds becam
urgent. Battersea Park was formed in 184
upon arable common fields; Kennington Par
was laid out in 1848 on the remnants of th
common. The old Metropolitan Board
Works acted in 1857 to secure the preservatio
of Finsbury Park, and again in 1863 to acqui
Southwark Park; and in the meantime th
Office of Works applied the proceeds of th
sale of York House for the formation of Victori
Park. Mr. Chubb proceeded to explain ho
the serious attacks being made on metropolita
commons by the action of lords of the vario
manors under Enclosure Acts led to a Parlia
mentary Committee being appointed, whic
reported against the enclosure of any mor
commons being allowed. In the meantime th
lords of the manors discovered the existence
the Statute of Merton, passed by the Barons i
1235, which allowed the lord to enclose th
common lands of his manor, provided he lef
sufficient to supply the needs of the freehol
commoners, and relying on this statute the
commenced on every hand to fence th
commons in. This led to the establishmen
in 1865 of the Commons and Footpaths Preser
vation Society, and its history was a record
triumphant success under the direction
Lord Eversley. Mr. Chubb gave some ver
interesting details of the fights waged by th
Society in regard to Hampstead Heath, Tootin
Graveney Common, Wimbledon Common
Wandsworth Common, Epping Forest, an
other open spaces. The general results of th
movement were remarkable, for whereas i
1865 some 16,320 acres of common land existe

the police district, only about 200 acres had ›ome private property. The lecturer next ıched on the small playgrounds for children ich had been secured, and on the valuable rk of the Kyrle Society in regard to disused rial grounds, and the very successful efforts of Metropolitan Public Gardens Association, ınded by the Earl of Meath. But whilst ıch had been done no one would assert that work should cease. London was growing in ry direction, and what was required was an elligent anticipation of future needs in order ıt open spaces should be secured when the ce of land was relatively low. A beginning l been made in this direction by the National ıst, which was gradually acquiring by rchase or gift hill-tops in Kent and downs l commons in Surrey. Perhaps it was not soon to suggest the possibility of local ıemes for saving scenes of natural beauty as morials of our fallen heroes. As future open ıces he would like to see saved the banks every stream within reach. Another open ıce could be secured by the realisation of dream of the London Society, which ualised a fine embankment along the ıthern side of the Thames. Shooter's Hill, oolwich, with its glorious woods and magnifiıt views, should be saved from the builder; big open space should be provided between xley and London; and beyond Croydon, ldington Hills could be largely extended with vantage. Large reservations of this kind uld not remove the necessity of providing en spaces in every growing town around ndon, and he looked to the Town Planning t to assist in the preservation of such sites.

A short discussion followed.

CORRESPONDENCE.

Married Architects and Enlistment.

Sir,—My son, who is adjutant of the 23rd ttalion London Regiment, writes to me from ance to say that his commanding officer is ry pleased to hear that married architects ve been invited to enlist in this battalion d that they may be sure of a hearty welcome ould they come to France.

Ernest Newton.

The Adam Manner.

Sir,—In the article "The Adam Manner" sue of May 12) I read some hard words which Italian artist will read without resentment.

You write:—"They go on to explain how appropriate the repetition of classical detail ay be if applied without due discrimination to its place and position.

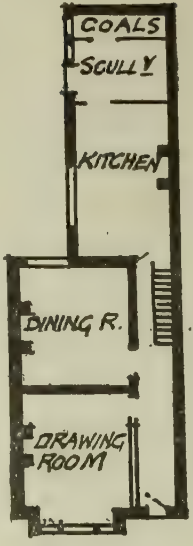
"Such absurd compositions, they added, ook their rise in Italy under the first of eir modern masters,' who unintelligently ed classical detail without considering its plicability."

I think that under these words you denote e Baroque style (am I wrong ?), which, owing the capricious movements of its lines and hness of ornaments, has never been mpathetic for the austere and frigid minds of ıglish artists.

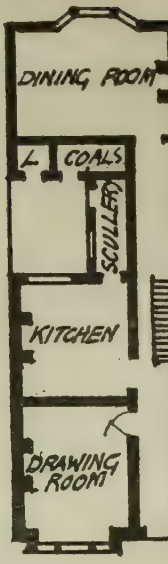
Allow me to ask: If the first of our masters the eighteenth century (who is this ?) is conlered unintelligent in artistic creations, which ord will you use to denote all our artists of e eighteenth century, and especially Invarra, rnardino, Vittoria, Alberti, Vanvitelli, ıgliafichi, Andrea Tirali, Ferdinando Fuga, d others, who have done artistic works as e façades of S. Cristina, Basilica di Superga, Francesco d'Assisi, and S. Teresa in Turin, e "Chiesa dell' Annunziata" in Naples, the eat staircase of the "Palazzo Reale" in serta and of the "Palazzo Durazzo" in enoa, the monument of S. Giov. and Paolo in enice, and the enlargement of the Corsini lace in Rome? All these works are of Baroque yle, and in their creation our artists have monstrated a great richness of invention, d have happily solved many difficult conructional problems. You do not like this yle—that is well known; but, as artists, ve you the right to disparage the artists who ve adopted it? I think not!

It is through the criticism that art is developg when unfairness and acridness are banished.

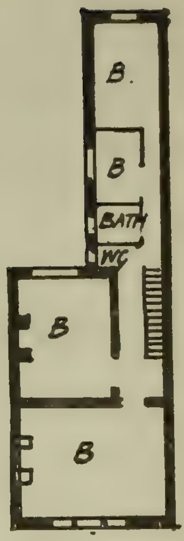
A. Brandani.



GROUND FLOOR



GROUND FLOOR AS IMPROVED



FIRST FLOOR UNALTERED

The Rebuilding of Sackville-Street, Dublin.

Sir,—It can scarcely be other than impliedly that to evolution belongs the principle of automatic segregation upon which you formulate your theory of "Comprehensive Street Design" and its involved methods and procedure in the relative architectural designing and extension of the powers and duties of local authorities to the heights and materials of street frontages. Thus the whole conditions which you contend for arise within cities in the progress of time and their respective growths and can never have a universal and very rarely a considerable application. Evidence is borne of this not having arisen in any very wide way in Dublin by the following, which I take to be editorial remarks, in last Saturday's issue of your old-established local technical contemporary the *Irish Builder and Engineer* in connection with Sackville-street:—

"It is clear that if a list of traders and sites were properly tabulated it would be found that a considerable proportion of firms are by no means wedded to Sackville-street either by choice or necessity. . . . A further point is that many of the traders set very little store by the upper portions of their premises, which are chiefly valued only for the shop frontages. The first floors are mostly let at comparatively moderate rents to solicitors, milliners, and others. The upper floors commanded very poor rents. This shows that the traders' requirements could be largely met by the provision of shops, the upper stories forming important public buildings, or rather the elevation would be a public building with shops on the ground floor."

Thus the facts and the ideas founded on them for the future do not correspond in the minds of your contemporary and yourself. And whilst I agree as to the present with him to an extent which displaces your theory in regard to local application, I take the liberty of looking upon your difference as to the future as strongly tending to show that the proper, which indeed I believe is also, broadly speaking, the inevitable, course is the return as regards Sackville-street and its businesses to be an almost complete return to the *status quo*.

But even this will be very difficult of achievement unless the financial benefits to be given by the State will be on the lavish lines which the circumstances and justice demand, and not upon the parsimonious principles for which the Government seem to be steering. If London through its institutional and Press organs of public opinion would accept this position it would no doubt greatly assist in untying the purse-strings of the Treasury.

If this financial issue didn't throw everything else into the background I'd like to discuss your views as to Nelson's Pillar.

A Suburban Dubliner.

The Terrace Villa.

Sir,—Just now, when a general revision of our ideas with regard to many subjects is being effected, it may not be amiss to consider whether in the case of the suburban villa of the commonest type the space available is used to the best possible advantage, and whether the rooms are so disposed as to catch the greatest amount of daylight. One would say that the existing type had probably been designed by some wealthy architect who would never have to live in one himself. I happen to live in such a one, which is better designed than most I have come across. In my experience, however, the most objectionable feature of this kind of house is the bay of brickwork at the rear. One of my principal sitting-rooms looks on to gloomy brick-walls, and when my neighbour lights his kitchen fire the smoke blows into my rooms, and *vice versâ*. By a rearrangement of the ground-floor plan, as shown, these inconveniences would be avoided, and it would also be possible to have in a small house a good-sized room looking direct on to the garden, and free, moreover, from the sometimes unwelcome observation of one's neighbours. Even the smallest garden judiciously planned could become a pleasing adjunct to this room and independent of any adjacent ugliness.

A Householder.

FIFTY YEARS AGO.

Revolving Venetian Shutters.

An arrangement of iron shutters has been patented by Messrs. Bunnett & Co., which affords thorough ventilation and shade, combined with the perfect security of a revolving iron shutter. The laths are made in iron and wood, flat, rounded, or curvilinear, as required; but, instead of the hinges being fastened by rivets or screws on the back of laths, they form continuous bands from the roller, on which the shutter coils to the bottom, and by which the shutter is made to lower. The top edge of each lath is connected at intervals by means of flaps to the continuous bands of hinges, leaving the lower edge of the lath free to be raised or lowered as may be required. Each lath is fastened to the one immediately above it by means of points working on a centre fitted to the end of each lath at its lower edge. By an easy contrivance the grooves in which the shutters ascend and descend are thrown open, and allow the shutter to take the shape of a venetian blind.

[⁂ From the *Builder* of June 16, 1866.—Ed.]

GENERAL NEWS.

Town Planning in South Birmingham.

Now that the Town-Planning Committee of the Birmingham City Council have completed their tentative proposals for planning the South Birmingham area, notice has been given that the draft map showing the proposals can be inspected at the Council House by owners of the land in the area or their representatives.

Church, Broadstairs.

The consecration of the new building, Christ Church, Broadstairs, was performed recently. The church accommodates over 300 persons, and has a vestry and parish-room attached. The architect of the church is Mr. A. Alban H. Scott, of Lincoln's Inn, London. The building has been constructed by Mr. J. T. May and the electric lighting installed by Mr. Vernon Hill.

The National Gallery.

Sir Charles Holroyd has completed ten years' service as Director of the National Gallery, to which he was appointed in 1906 for five years. At that time the Directorship had been vacant since the resignation of Sir Edward Poynter some eighteen months earlier. In June, 1911, he was reappointed Director for a second term of five years. It is stated that he is in bad health and that in consequence he is unlikely to seek a further extension of his Directorship.

Lord d'Abernon, presiding at the annual meeting of the National Arts Collection Fund, said that he had long been impressed by the fact that while the National Gallery was splendidly representative of all the great foreign schools, particularly of the Dutch, the Flemish, and the Italian, our representatives of English schools were in some departments singularly defective. The earlier periods of English painting were almost unrepresented.

The Italian War Exhibition.

Thursday, June 22, is the date now arranged for the opening of the exhibition of war pictures and cartoons by Italian artists at the Leicester Galleries. In addition to the series of paintings of the Italian war zone by the artist, Ludovico Pogliaghi, who went to the Alps with the direct authority of the Government, there will be many other features. For the first time in England will be shown a collection of original drawings by Galantara (sometimes known as Rata Langa), whose influence as a cartoonist, it is said, is so widespread in Italy that he has for long been recognised as a strong political force and a valuable asset to the cause of the Allies. Another artist whose work will arouse enthusiasm among the discriminating is Sacchetti. Many of the leading Italian artists have made drawings specially for this exhibition. There is, for instance, a series of paintings dealing with the tragedy of Nurse Cavell by Corbella, one of the most popular artists in Rome.

Liverpool Architectural Society.

An outing was enjoyed by members of the Liverpool Architectural Society on June 3, when by the invitation of Mr. T. T. Rees, the architect of the buildings, they paid a visit to the North Wales sanatorium in Denbighshire. The party was headed by Mr. Percy Hinde, the President of the Society, and Mr. Richard Holt, the Hon. Secretary, and included the Mayor of Birkenhead (Mr. James Merritt), the contractor for the buildings, and the Mayor of Wallasey (Mr. Sidney Dawson). The visitors found the new institution, which is to form part of Wales's memorial to the late King Edward VII., in a state approaching completion. Accommodation is provided for 220 patients, men, women, and children, and later this will be extended to provide for 250 persons. Bacteriological and disinfecting facilities are provided, and one block will be set apart for cases requiring surgical treatment. The completed scheme will cost about £40,000. Attached to the institution is a farm of about 250 acres, presented by Mr. D. S. Davies, of Denbigh, and a part of the scheme is the rebuilding of the farm buildings on model lines.

1st London Engineer Volunteer Corps.

The 1st London Engineer Volunteer Corps has been formed by the amalgamation of the E.I.V.E. Corps with the 4th Battalion Central London Regiment (Architects' Corps) and the L.C.C. Training Corps. The three corps have now, in accordance with the wish of General Sir O'Moore Creagh, become an engineer corps; with the exception of the Post Office Engineering Volunteer Training Corps (which is composed of civil servants), it is the only engineering corps in the metropolitan area. Full information with regard to the above corps can be obtained from the Adjutant, Chester House, Eccleston-place, Victoria, S.W.

Organisation of British Engineering Industry.

The following resolutions were carried at the general meeting of the Council for the Organisation of British Engineering Industry (Manufacturing Engineering Concerns Section) on June 6:—

"(1) That this meeting approves the steps taken to organise British Engineering Industry by the Council appointed on December 6, 1915.

(2) That this meeting approves the formation of an Association on the lines advocated in the Memorandum circulated, with power to negotiate, and if advisable to amalgamate or combine with existing or projected Associations; and this meeting pledges itself to support such an organisation.

(3) That those firms who by signing the card have promised their adhesion and support to the organisation be asked to subscribe to the funds of the new Association, and to make forthwith a minimum payment of £5 on account of their first year's subscription towards preliminary expenses.

(4) That the existing Committee be empowered to give effect to the resolutions passed at this meeting."

Norwich Union Fire Insurance Society, Ltd.

In presenting the 118th Report of the Norwich Union Fire Insurance Society, Ltd., to the annual general meeting, held at the Head Office, Surrey-street, Norwich, on the 6th inst., the Chairman (Major Cubitt) reported satisfactory results in all departments. The premium income from the various branches of business reached a total of £1,798,280. In the Fire Department, in which the premiums amounted to £1,188,766, the losses paid and outstanding were £600,663, and after payment of all expenses and commission and strengthening the reserve by the addition of £75,688 there remained the sum of £108,046 to transfer to the profit and loss account. The accident premium income, standing at £467,473 showed a substantial increase, whilst the claims paid were £244,031. In the profit and loss account the first item is £168,120, being the balance brought forward from last year; there is also to its credit £99,794 interest on investments and £161,519 trading profit, which, with transfer fees, £31, makes a total of £429,465. After making the usual payments, the directors were enabled to set on one side an Investment Reserve and War Contingency Fund of £200,000, and also to recommend an increase in the dividend of 3s. per share, making the amount payable for the year 1915 35s. per share less income-tax. The balance sheet shows the total assets to be £3,045,472.

Excavations in the Island of Tiree.

Under the direction of a member of t Antiquarian Society of Scotland, excavatic are now being conducted at the undergrou dwellings recently discovered at Kilkennet in the island of Tiree.

Wargrave Church.

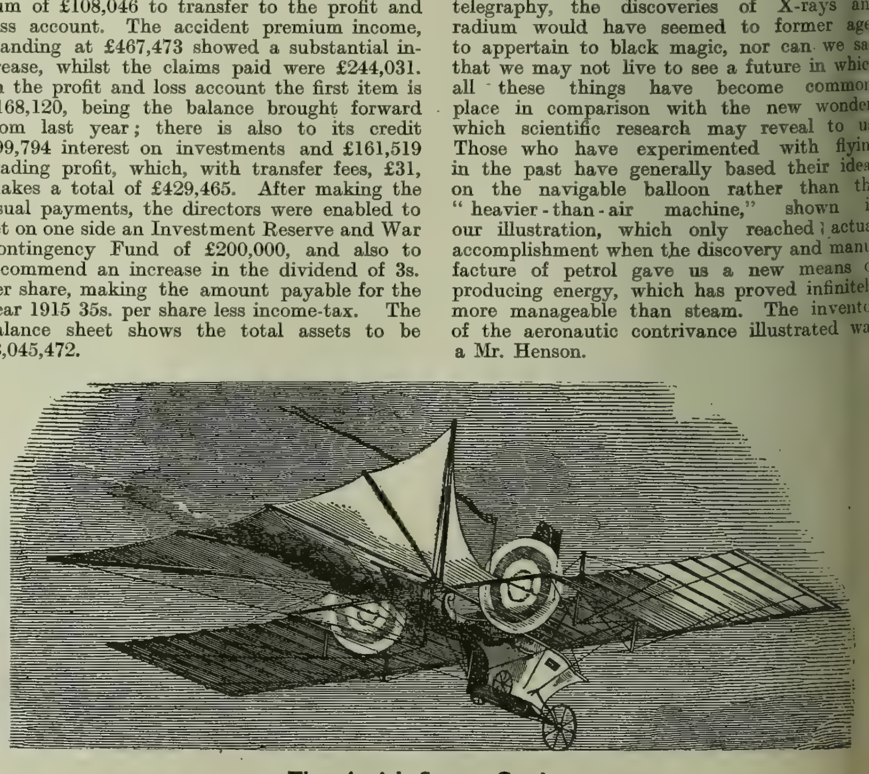
Wargrave Church, which was burnt do by suffragettes on Whit-Monday, 1914, h been rebuilt at a cost of over £13,000. In t course of the rebuilding various architectu discoveries have been made, including fragme of a thirteenth-century doorway.

The Whistler Memorial.

Inquiries having been made regarding t memorial to J. McN. Whistler by M. Augu Rodin, organised by the International Socie of Sculptors, Painters, and Gravers, t Committee of the memorial state that in h last letter, dated April 13, M. Rodin said th the memorial was almost finished when t war broke out, since when he had not work at it. It would be the first thing he wou do as soon as he had a little more time. Rodin added that he could not give a rep to the subscribers at the moment, but th six months after the end of the war t monument should be ready for London, least six months being required for casti the bronze. The Committee also state th the entire sum subscribed for the memorial h been collected, invested, and placed in t hands of trustees.

The Aerial Wagon.

A correspondent has called our attentio to illustrations in our issue of April 1, 1843, which we described an inventor's proposal f a "steam-driven air carriage." The illustra tions which we then gave, one of which w reproduce, bear a considerable similarity t the modern aeroplane. The ambition to f has been one which has inspired the effort of inventors for many centuries, but it probable that most of us even twenty yea ago would have doubted its ever being succes fully achieved. During the last thirty yea greater progress has been made in practic scientific discovery than was ever made in an like period of the world's history. The su marine was foreshadowed by Jules Verne i "Twenty Thousand Leagues under the Sea, and we have in the present war seen what i capabilities for destruction are. Wirele telegraphy, the discoveries of X-rays an radium would have seemed to former ag to appertain to black magic, nor can we sa that we may not live to see a future in whic all these things have become commo place in comparison with the new wonde which scientific research may reveal to u Those who have experimented with flyi in the past have generally based their ide on the navigable balloon rather than th "heavier-than-air machine," shown i our illustration, which only reached actu accomplishment when the discovery and manu facture of petrol gave us a new means producing energy, which has proved infinite more manageable than steam. The invent of the aeronautic contrivance illustrated wa a Mr. Henson.



The Aerial Steam Carriage.

(From the *Builder*, April 1, 1843.)

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ILLUSTRATIONS.

Leadenhall-Street Premises.

MESSRS. TREHEARNE & NORMAN'S design shows the proposed treatment for the major portion of the widening of Leadenhall-street, which has already been arranged. The frontage treated is for a length of about 195 ft. Unfortunately it has not yet been possible to commence building operations owing to the war.

The design is for a Portland stone front with metal casements, and when carried out will probably be one of the largest conceptions dealt with in the City of London in recent years.

The Churches of the Later English Renaissance.

OUR illustrations are of two churches by Nicholas Hawksmoor—St. George, Bloomsbury-square, illustrated by scale drawings made by Mr. Fitzroy Doll, F.R.I.B.A., under whose supervision the church was altered and decorated in 1897, and St. George-in-the-East. Both are referred to in our article on page 433.

The North-Western Polytechnic.

THE whole of our inset illustrations for June 2 were given up to this important scheme. Tenders were delivered for the erection of the building within a few weeks of the commencement of the war, that of Messrs. Dove Brothers being the lowest; and, moreover, the tender was of an amount not exceeding the margin allowed upon the estimate.

All question of proceeding with the building when war broke out was shelved, and the matter now stands indefinitely postponed.

The illustrations are taken from the working drawings, which, we understand, have been prepared so as to ensure rapid progress when work is started. Considerable forethought has been taken down to the smallest detail, so that alteration during the progress of the building or variation of any kind will be unnecessary.

The building generally will be of mixed colour brick facings upon a Portland stone base, with the smallest "peggies" of rough green Westmorland slates as roof.

Windows are steel, floors fire-resisting, with special precautions to make them as sound-proof as possible. Walls are glazed in staircases and passages. Ventilation is by suction into large flues over the corridor ceilings, the pull being provided by the boiler flues. The accommodation is upon a very much larger scale than was contemplated when the scheme was propounded. Other schools have been incorporated, a large assembly hall added, and very considerable accommodation added for recreative purposes.

The advice and guidance as to the arrangement of the building given by the various authorities concerned have been extraordinarily helpful, and the scheme as it now stands embodies the very best expert opinion, and is believed to be one which will receive the approval of all those interested in the promotion of polytechnic work.

The design was chosen in competition, and, though the building has been considerably enlarged, it does not materially differ from the design originally submitted. The architect is Mr. Arnold Mitchell, of 17, Hanover-square, W.

"Mancroft Towers," Suffolk.

THIS building, the residence of Colonel Philip Back, was an attempt to plan and design a house in the style of the old red brick Tudor manor houses to be found in this neighbourhood. A feature in the plan is the long gallery extending from the five-light window over the porch, seen in the view, quite through the building, and terminating at a window in the tower. The higher bay and central windows seen light the hall.

Situated on a slight spur and commanding extensive views over the low-lying marsh lands to the south, west, and north, the tower naturally suggested itself, and now it is built becomes a landmark. Oulton Broad lies handily to the south. The whole of the exterior is in red brickwork except the roofs, which are covered with tiles, and the windows are all lead glazed. Mr. Young, of Norwich, was the general contractor. The building was designed by Mr. George J. Skipper, F.R.I.B.A., architect, Norwich. who also is the author of the drawing we reproduce.

Blackford Church, Somerset.

IT is proposed to erect a screen and rood loft gallery at this church, which will be the gift of the Rev. C. F. Haines. vicar, and it will probably be installed within the next two or three years, the lower portion being undertaken shortly. The work will be executed in selected oak by Messrs. R. L. Boulton & Sons, of Cheltenham, from designs and drawings by Mr. F. Bligh Bond, F.R.I.B.A., architect, Glastonbury.

Ulm Cathedral.

WE illustrate the west front of Ulm Cathedral, which has been completed in accordance with a design made in the Middle Ages. Ulm has the distinction of possessing the highest tower in the world (excepting the Eiffel Tower), which exceeds 500 ft. in height.

A Baroque Mirror.

THIS illustration shows an interesting piece of Baroque furniture from an Austrian Church.

◆

MEETINGS.

MONDAY, JUNE 19.

Royal Institute of British Architects.—Presentation of the Royal Gold Medal. 3 p.m.

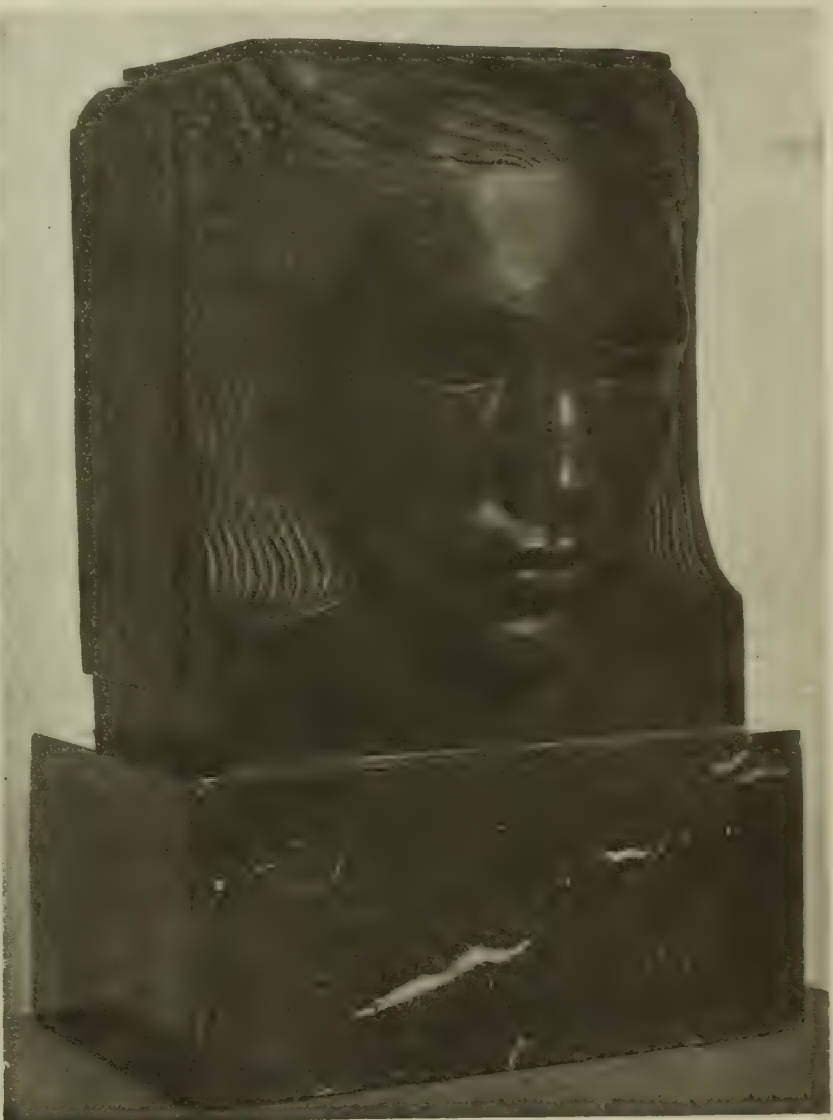
London Society.—Mr. Arthur Crow, F.R.I.B.A., on "The Port of London: Past, Present, and Future." 5 p.m.

◆

MASK IN BLACK MARBLE.

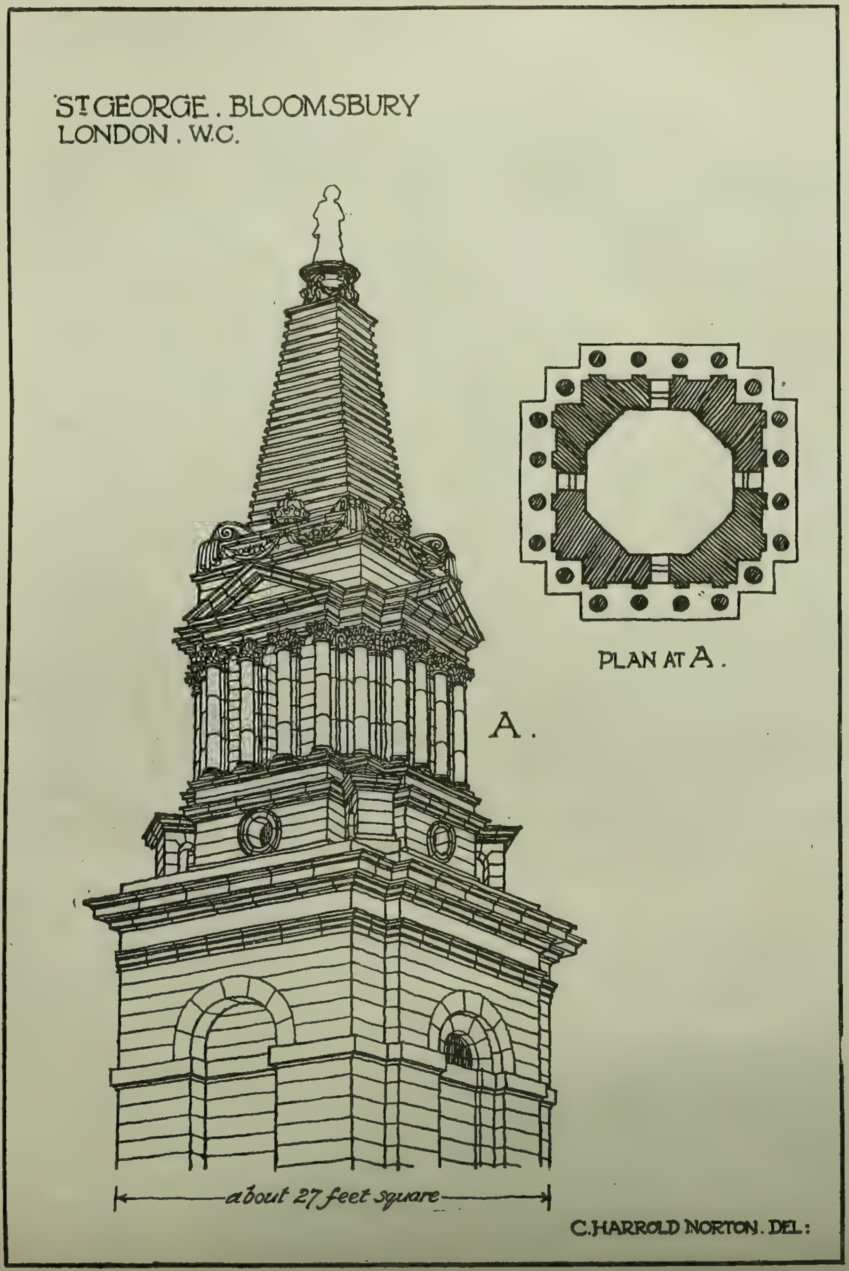
THIS mask in Belgian black marble on dark red marble base was carved direct by me without the aid of a model of any kind, and not in the usual manner by "pointing" from a plaster cast. The material is extremely treacherous and as hard as granite; in carving, pieces pluck out without warning.

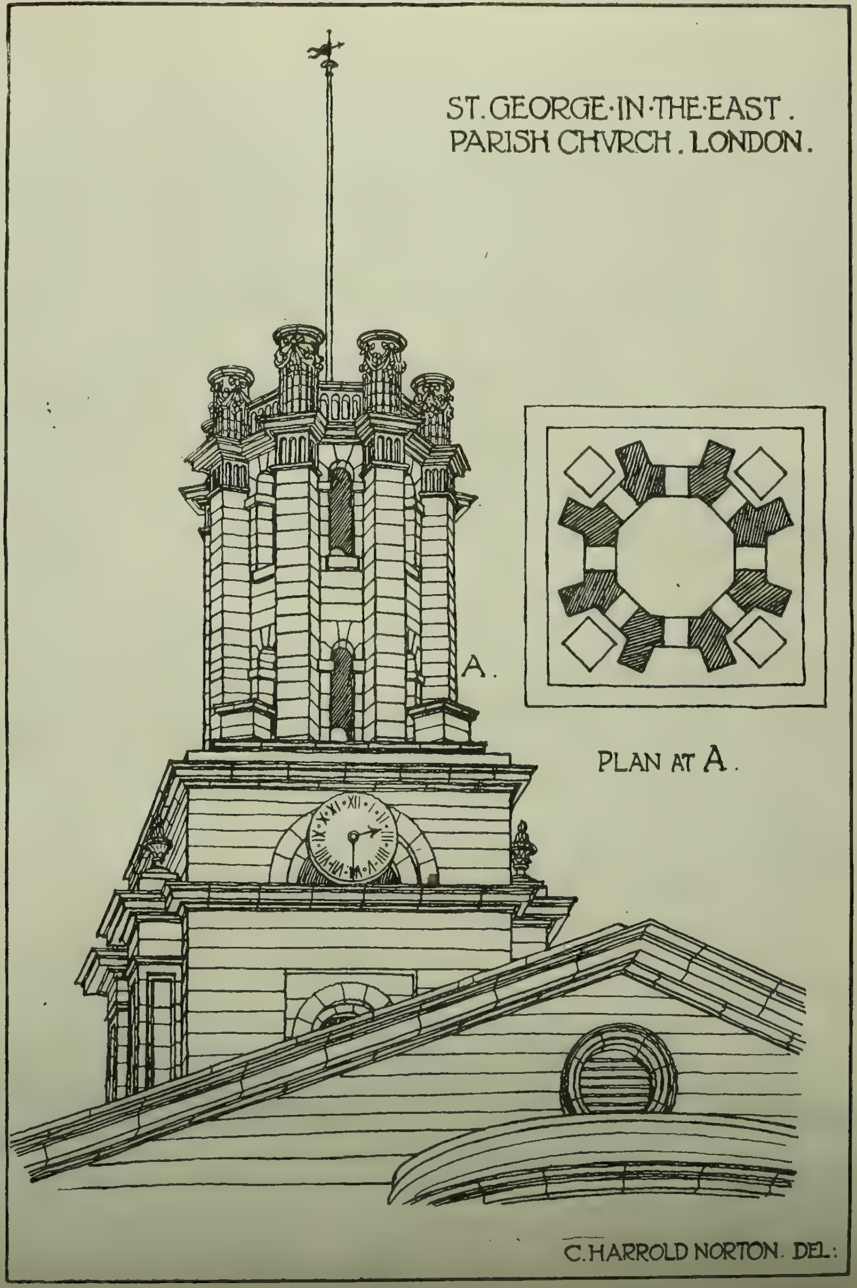
The material takes a good polish on account of its hardness. RICHARD GARBE.



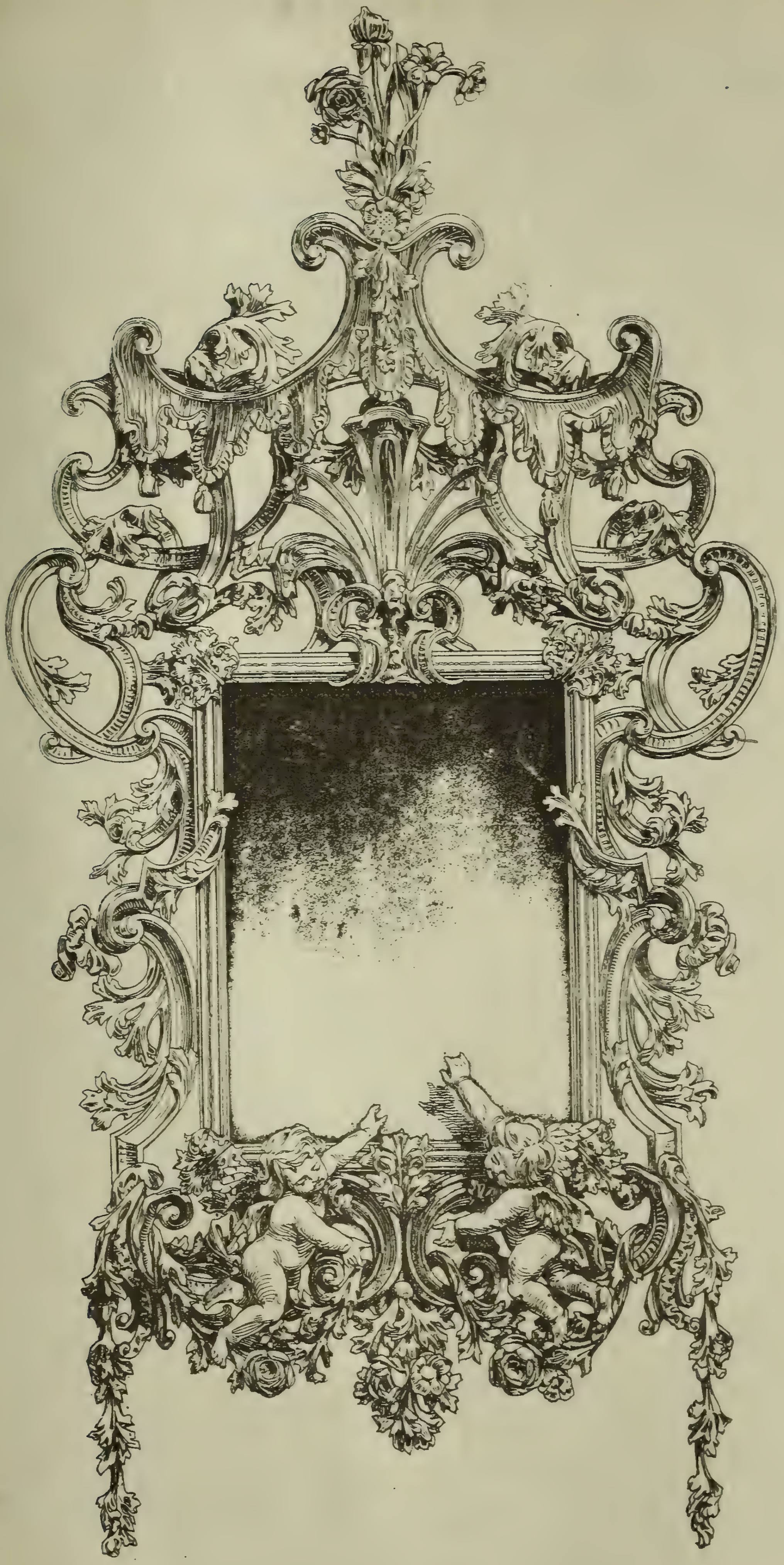
Mask in Black Marble.

Mr. Richard Garbe, Sculptor.





The London Churches of Wren and Later Architects of the Renaissance. *(See page 433.)*



Baroque Mirror from a Church at Gleink, Austria. *(See page 437.)*

THE DESIGN AND CONSTRUCTION OF COW-HOUSE

By J. M. W. Halley, F.R.I.B.A.

In an admirable pamphlet published by the Board of Agriculture and Fisheries on the subject of cow-houses it is written that "it is comparatively easy to provide new buildings which will meet all requirements at a moderate cost."

Cost, however, has very little to do with "requirements" beyond the very elementary and exiguous one of sound construction. Once you have secured this—and without it all one's efforts are wasted—the rest is a matter of careful thought.

At the outset it may be as well to say that sound construction is not synonymous with costly construction. In its kind a wooden construction may be as sound as one of brick or stone. It will be obvious to anyone that "sweetness and light," qualities that should appertain very closely to cow-houses, do not cost a great deal of money. The pamphlet to which I have referred above states that "it is much more difficult to alter an existing building so that it can be made as suitable as a new one." This is true; but if an old cow-stable is sufficiently wide, if it takes two rows of cows, it is very easily susceptible of remodelling. What is rather difficult to change is the relative position of buildings, the relation between the cow-house, root and chaff house, mixing, milk-room, dung pit and urine tank (the latter, usually being conspicuous by its absence, does not offer much difficulty). Each farm offers a different problem and requires a different solution, so that it is impossible to lay down laws to govern every contingency. It will be of most use if I treat merely of the remodelling of the cow-house itself without treating of the subsidiary buildings. But first let me speak of a new building, designed expressly to house cows in the most economical and scientific way.

The most durable kind of wall for any building is one of stone or brick. In Scotland a stone wall of about 21 in. thick would probably be cheaper than a brick one, but in most parts of England brick is the cheaper material. The usual English 9-in. brick wall, however, is neither good for man nor beast, and should never be used. It is very porous and is always damp. It is much better, and adds very little to the cost, to build a wall with a cavity. The usual practice (when a cavity wall is used) is to build two 4½-in. walls with a space between of 2 in. A wall built in this manner is drier and warmer than a 14-in. solid brick wall. To increase further the efficiency of this hollow wall some time ago I built a cow-stable with a 4-in. cavity; the larger body of air acts as an excellent insulator, preventing the heat from passing out or the wet and cold from passing in. For a small building I should not have the slightest hesitation in using a patent brick 4½ in. thick for the outside walls. It will be seen from the diagram (Fig. 1) that for a considerable part of its area it is hollow, and consequently makes a warm and a dry wall. The joints between the bricks are, of course, a source of weakness, but this can be remedied by covering the outside with a thin coating of cement and sand. Indeed in a sheltered situation I should be content to treat the walls with a coating of tar, a covering easily renewable by the farmer himself at an insignificant cost.

The use of this brick, it may be said in passing, offers a solution of the problem of the housing of the labouring man, for with it it is possible to build for £150 a cottage containing three bedrooms, living-room, scullery, and earth closet.

A wall—it matters not of what material it is built—must have a damp-proof course near its—base, some 6 in. above the ground, to prevent the damp from rising into the wall. This may consist of two courses of slate bedded in cement, or any one of the numerous bituminous preparations in the form of sheets which can be cut to any size and laid easily and cheaply.

The common form of roof is constructed of a series of heavy principals placed about 10 ft. apart, on which rest purlins, which again carry the rafters. Now a roof of this sort exercises a considerable pressure on the walls where each principal rests, and consequently a buttress is required under each—a method much more costly than building a hollow wall without buttresses. It is quite possible to build a roof in a simple manner, in such a way that its weight is distributed between the walls and internal wooden posts. These posts, besides carrying a share of the weight of the roof, can be arranged to come in the cows' standing-place, and in the absence of stall divisions helps to keep the cows straight in their places. They can be spaced 6 ft., 9 ft., or 12 ft. apart, accommodating two, three, or four cows. The section of cow-houses (Figs. 2 and 3) shows details of this sort of roof.

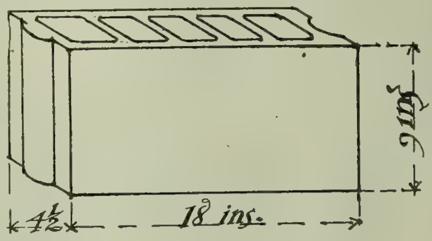


Fig. 1.

The cheapest form of roof covering is corrugated galvanised-iron. It is unnecessary when using this material to make the slope of the roof as steep as when employing tiles or slates, as it can be laid as flat as 20 deg. from
the horizontal, whereas tiles should no
laid at a less slope than 45 deg., and slates
pitch not less than 30 deg. (Fig. 3).
proper attention an iron roof can be
to last forty years. The first care is to o
good material, and then, after the first
have washed out the acid used in the galvan
process, to give it two coats of silica gra
paint. This paint will last for ten years.

The inside of an iron roof must be boa
to keep the building warm. Skylights
easily be introduced into this kind of
without much expense, as well as prov
made for ventilation along the ridge as sh
on the diagram (Fig. 2). At the same
iron does not make nearly such a good ro
slates, which, if well chosen and carefully
are practically indestructible. As it is
expensive to introduce skylights into a
roof than into an iron one, it is best to
them out and to provide instead one or
wells with glass roofs. The wells also ac
very efficient ventilators, the sides b
composed of louvres, the position of w
can be adjusted to suit the weather. A gl
at the diagram (Fig. 3) will explain this p
Fig. 4 shows a detail of this ventilator.
louvres are pivoted on the axis of their u
edges and can be opened or shut as the
jecting spurs on the centre pillar are tur
Whether the roof is covered with iron or slat
tiles, it should never be left without an e
gutter. Its omission, by allowing the rain
the roof to run down the walls, keeps
damp, just as much as the lack of a dampco
does. Further protection can be given
projecting the eaves beyond the walls.

Light and ventilation are the great deside
in a cow-house. For many reasons it is
ferable in a cow-house with double stal
have a central feeding passage. One re
is this, that with fairly low eaves it is pos
to obtain plenty of light and air through
low walls. This could not be done if the
were placed facing the outside walls, u
in the exceptional case when two fee
passages are introduced between the h
of the cows and outside walls. There i
saving of labour if one dunging passage
gutters from both sides, over one fee
passage and two dunging passages. The sa
in reality is with the latter system in a prop
considered plan.

Nothing contributes to cleanliness in
cow-house so much as light, and the mini
of 2 sq. ft. per cow can with advantag
increased. There should be no difficult
doing this, for windows can be ranged
both sides and at one end. The con
form of cow-house window has not muc
commend it. I refer to the type only
upper half of which is glass, the lower
being a hit-and-miss ventilation.
preferable to glaze the entire area, pivotin

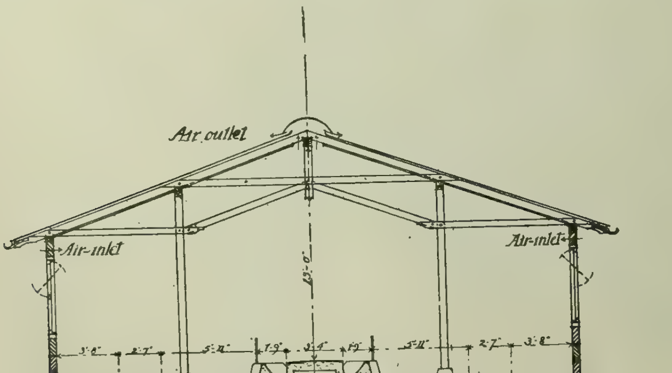


Fig. 2.

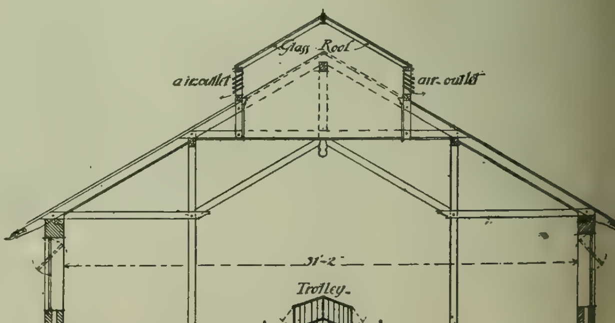


Fig. 3.

ɔer half horizontally. A simple fastener ɔws it to be opened very easily by the cow-n. These windows may be made of wood iron. A small opening should always be under the sill to allow condensed moisture to ape. In addition to the windows small square nings should be left in the brickwork, close ler the eaves, and fitted with a simple ɔden sliding shutter on the inside to regulate inflow of fresh air. I have already spoken lighting and ventilation in the roof, and is unnecessary to mention them again ept to say that the outlets for foul air in roof should not be less than twice the area the inlets. It is well to err on the side of erosity. The minimum given in the nphlet on the construction of cow-houses ntioned above is 40 sq. in. per cow for the ets.

'he whole point about housing milch-cows half the year is to prevent the unnecessary sumption of food merely to keep up the perature of the cows—that is to say, for poses other than that of producing milk. may therefore prove false economy to keep cow-house too freely ventilated if it be the expense of warmth. But there is ays a golden mean, and in a properly-con-ucted building with boarded roof and low walls it should be possible to prevent temperature falling below 50 deg. Fahr., ile admitting a plentiful supply of fresh air. ne experiments undertaken by the Highland Agricultural Society during the winter of 3–9 showed that a cow-house kept at deg. Fahr. contains three times as much bon dioxide as a freely-ventilated building t under 50 deg. Fahr. Further, and what of equal importance, the production of milk y be as great in the one case as the other, ile the health of the animals will be better the latter case.*

t is essential that the floors of a cow-house uld be damp-proof—that is to say, they uld be so constructed that the damp from ground cannot rise through them. Made s they will also be impervious to all liquids ught into contact with their surface, which drain off into channels constructed for the pose. Cement concrete makes the best cheapest floor, and it is easily susceptible being moulded into the shapes required standing-space, mangers, gutters, etc.

t may be said in passing that the floor, as ided on the base which the diagrams illustrate gs. 2, 3, and 5), do not pretend to be able accommodate all kinds and conditions of tle. It will be found, however, to provide ple room for Shorthorns. The principle lerlying the design of the floor remains the ne for all classes of cows. The space allowed each cow in this case is 3 ft. 1 in. by 5 ft. in. long, exclusive of the manger.

n this floor two features distinguish it from usual type—(*a*) the width of the dunging ter, (*b*) the manger (Fig. 5). The former 2 ft. 7 in. wide with a fall of 1¾ in. to its er side, whilst the latter is continuous, ring for fodder and water, and the feeding sage is raised to the level of its top. The ra width of the dunging gutter and its sharp outwards are both dictated by the necessity getting the liquid part of the dung to a tank the shortest space of time. The fæces will into the gutter at the cow's heel and remain there, but the urine wherever it falls will be led away to the drain as quickly as possible. With a gutter of this width and shape all liquids will quickly find their way to its outer corner and so to the drain, for it would be made to slope longitudinally (1-40) as well as towards the back. A very little slope is given to the cows' standing-place and one slightly greater is given to the dunging passage, so that no liquid would be likely to lie where it was not desired. It would thus tend to dryness and would quickly dry after being swilled down with water.

Before leaving the subject of floors it will be as well to consider the material of which they should be made. For the concrete it is preferable to use granite, gravel, or hard limestone, or broken bricks, and no piece should be larger than a hen's egg. Granite, of course, makes the best floor, but, while it is essential in a horse-stable, it is not so necessary for a cow-house, so that it is unnecessary to go to this expense if a cheaper material can be obtained. The concrete may consist of one part of cement, three parts of sand, with as much as five parts of broken stones, and should be laid on ground that has been well rammed about 5 in. thick and formed roughly to the contours required. When this is hard, a finishing coat of cement and sand should be laid and finished with a smooth surface. It is unnecessary to form V-grooves in the floor of the stalls, or indeed in any part of a cow-house, as they are difficult to keep clean, and one of the chief ideas governing the design of these floors is to make them so that they can be cleaned easily with a hose. It will be found that a cement floor is not slippery when it is kept clean.

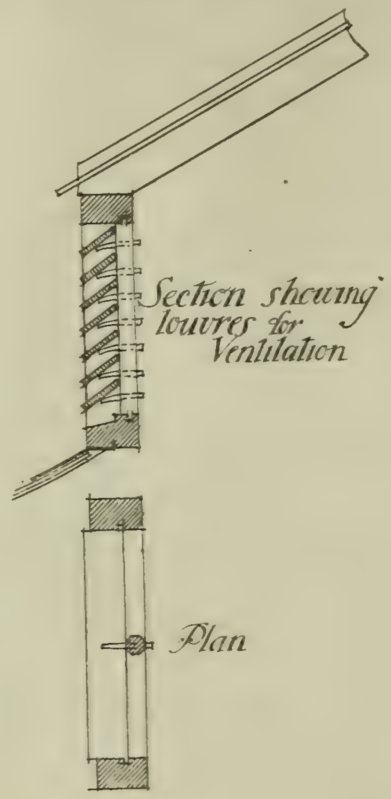


Fig. 4.

A counsel of perfection requires that each cow should have a separate manger in order that she can be fed according to her powers of producing milk—each cow having practically a different menu—and also that she should have a water-trough so that she may drink when she pleases. But, however desirable these niceties may appear as ideals, they are costly in the first instance. Besides, a scientific and careful dairyman will grade up his cows till they are fairly similar in output, and so entitled to the same amount of fodder, and even with a continuous manger it is an easy matter to give a favourite cow a little extra cake.

Water is introduced into the cow-house in order to avoid sending the inhabitants out in the depth of winter to drink in a cold pond. In this way it protects the cows from the risks of chills, and incidentally it increases the milk yield.

It is unnecessary that the cow should be able to satisfy her caprice of drinking when she will; therefore a separate water-trough is really not necessary. The manger makes an excellent one. Water should be laid on to it at one end and an outlet should be provided at the other. With this method the labour involved in watering cattle is eliminated, and it is no trouble to clean the manger. It is well to be able to flood the manger quickly, so that the last cow can drink at the same time as the first. A 2-in. supply should therefore be used, with a tap of the same size actuated by a lever. The manger should be given a fall of about 1 in 200, or even less, to prevent the water running off too quickly. Several considerations dictate the shape of the manger, which, it will be observed, is different from those in general use. It will be obvious that a given amount of water will rise much higher in it than in one of semicircular section. As the water is running away all the time a considerable saving of water is effected. Again, the cow has greater control of her food using such a manger, being able to push it with her nose into the corner, where it has no escape but down her throat. The feeding passage should be kept level with the top of the manger, so that the latter can be filled by gravity if a properly-designed trolley is used. On the diagram (Fig. 3) I have shown a trolley such as has been evolved for the Manor Farm, Wantage. It will be seen from the section that the sides are hinged at the top so that they can be opened by releasing a fastener, when the roots fall out into the mangers on either sides. A division down the middle and a bottom which slopes up to this division will cause the trolley to empty itself with a minimum of labour. A railway the metals of which stand above the level of the feeding passage is objectionable in many ways; it is difficult to keep clean, and the rails form harbours for dirt; it is also a stumbling-block for unwary steps.

By raising the passage as I have suggested above it is possible to form a railway free of objections. It consists of an ┐ iron (Fig. 5, *C*) on each side of the passage, and level with it. It thus acts as a rail and as a strong binder to the concrete. It will be observed that the wheels of the trolleys have their flanges on the outside instead of inside.

The apparatus for tying up the cows should be as simple as possible (Figs. 5 and 6). For

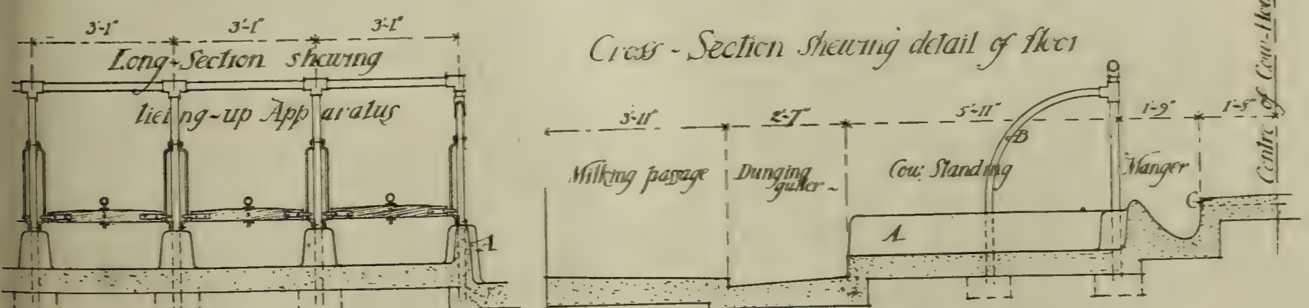


Fig. 5.

"Journal of the Board of Agriculture," October, , pp. 550, 552.

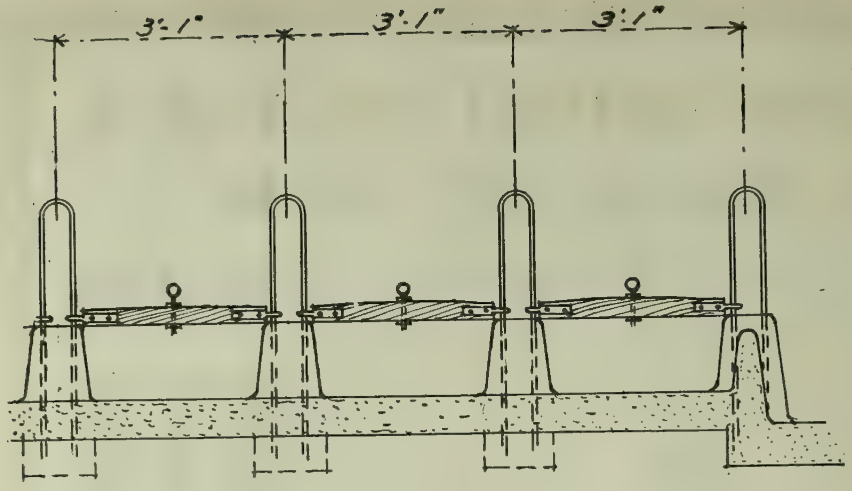


Fig. 6.

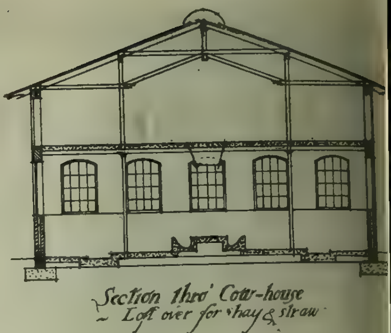


Fig. 8.

cleanliness and health iron is a better material than wood, and recently several ingenious arrangements of tubular iron have been put on the market for this purpose. In the illustrations (Figs. 5 and 6) I have shown two arrangements which are both cheaper than any of those on the market (the simpler, Fig. 6, indeed costing no more than 10s. per cow). As a rule cows rise when feeding begins, and in their eagerness are liable to push towards the passage. At this time, if they void any excrement it falls on the floor of the stall and is likely to soil the cow later if it is not at once cleared away. A tying-up apparatus therefore should be contrived, if possible, to prevent this forward movement, while giving the animal freedom to move its head up and down and to a limited extent sideways. Both of these fittings fulfil these requirements. In principle they are the same. Each has a tethering-bar of ash-wood with a swivel-ring in the middle, to which the cow is tied by a rope. The tethering-bar can be raised by a movement of the cow's head some 18 in. above the top of the manger (a height sufficient to bring the neck of the animal in a straight line with its back), but that is its only movement—up and down. The diagrams explain themselves better than words, so that it is unnecessary to say much more on this head beyond observing that it is very necessary to build the iron bars well into the concrete. At each end of the cows' standing-place it is advisable to form a low wall (as high as the manger) (Fig. 5, *A*) to prevent the litter falling on to the floor of the cross passage, and to keep the end cow in her place an iron bar, in the form of a bow, is inserted in the concrete (Fig. 5, *B*).

In attempting the metamorphosis of an old barn or cow-house into a scientific building, it may be necessary to adopt some different arrangement of the cows, but if the width is sufficient the method advocated here will be found economical in working. As a rule one of the first operations will be the insertion of a damp-proof course (most old buildings do not possess one). An opening is made in the wall about 6 in. above the ground, a few inches high by some 2 ft. or 3 ft. long, into which are laid two courses of slate laid in cement, in such a manner that the upper slate covers the points of the lower. The cavity is then filled in and another slit is cut in which slates are bedded as before and so on. An eaves gutter will most likely be wanted in an old building, and more windows will require to be knocked through the walls. But the whole idea should be to endeavour as far as possible to make the altered building possess the amenities I have recommended for a new one.

A cow-house in itself is only a comparatively small part of a dairy farm, and I have endeavoured to show (Fig. 7) the relationship of some of its parts, as the dung-pit, urine tank, calf-house, etc. The diagram shows these. Over the milk-room a tank should be placed with a sufficient capacity for a day's consumption—ten gallons per cow in addition to the water required for the milk cooler. It is preferable to fill this tank by gravity, but if that is impossible, then recourse must be had to pumping. In this larger plan I have arranged a loft over the cow-house for the storage of hay and straw, which can easily be served for food and litter to the cows through two traps in the roof floor (Fig. 8). Over the roots and food mixing room are stores for oil-cakes and other foods, which can be dropped into the trolley below with a minimum of labour.

As an annex to the main building another house is shown for calves and pigs. It will be noticed that the whole disposition of the buildings is arranged with an eye to the manufacture of manure, both liquid and solid. The former by gravity finds its way to the tank and the latter by a comparatively short route can be carried from all animals to the dung-pit.

Many of the principles advocated above have been adopted at the Manor Farm, Wantage, which I have just completed for J. Madson-Mygdal, R.O. The cow-house is planned to accommodate 160 cows, standing in four rows (Fig. 9), with feeding passages between heads of the animals. The low building the right of the view (Fig. 10) gives a g idea of the appearance of the cow-house fr the outside. The other buildings are ba calf-house, granary, and other adjuncts o modern farm.

◆

ECONOMIES DURING THE WAR.

The Lord Mayor of London presided at opening of a Conference of local authorities others called by the Royal Sanitary Institu at Buckingham Palace-road, on Friday week, to consider the question of "Sanit Administration under War Conditions," said that, whilst many suggestions regard economy were now being made, they had discriminate between what was only sentim and mere convenience and what mi constitute a danger to health.

The Mayor of Westminster, who succee the Lord Mayor in the chair, said that no m important question could be discussed at present time in its relation to public hea Every authority in the country was experienc the difficulty of maintaining that high stand of sanitation which had been the pride of

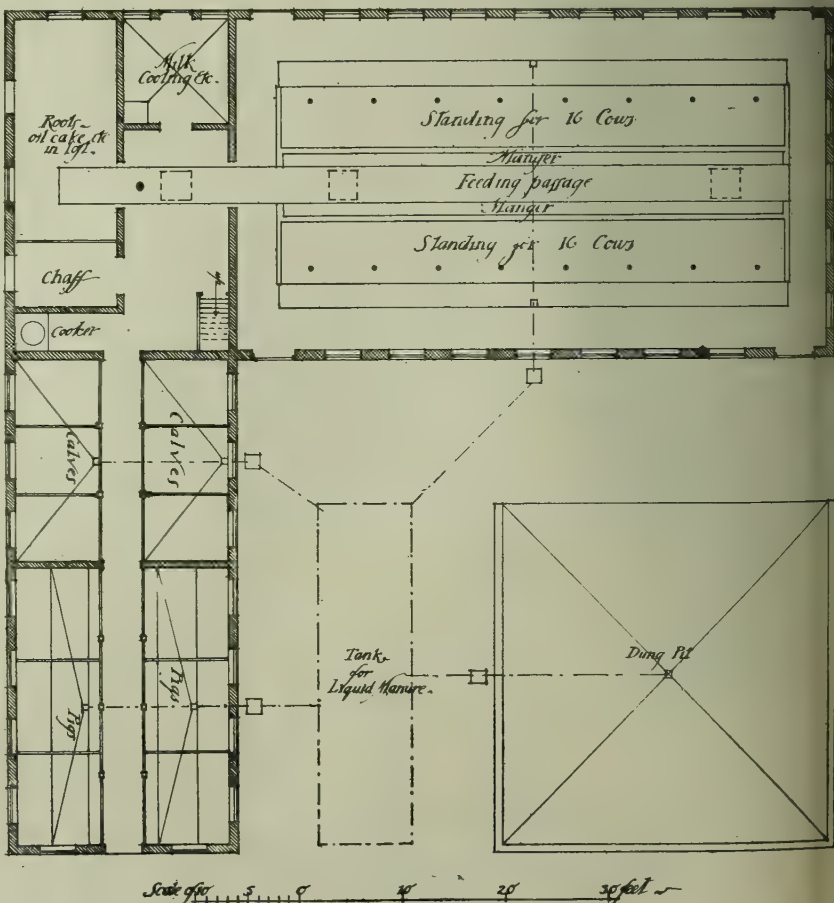


Fig. 7.

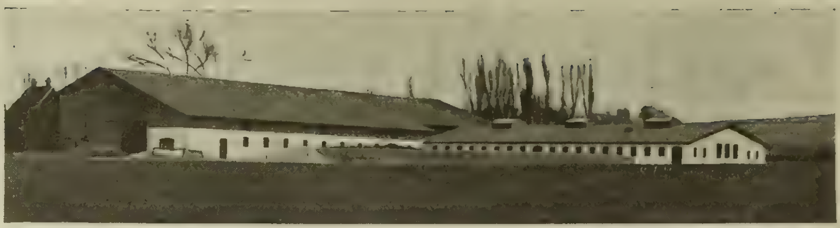


Fig. 10. Design and Construction of Cow-Houses. (*See page* 440.)

y. In Westminster they had just had
sider the matter of street paving. Many
ir streets were paved with wood, and,
t material could only be obtained at a
ost, they had had to curtail their renewals
content themselves with repairs which
s afraid in the long run would not be
nical. They had endeavoured to make
old wood blocks as far as possible, and
ow employing women for cleaning them.
revious day they discussed the paving for
ane, and, owing to the cost of wood, had
d to make a trial with a new paving,
Lithomac." It was only an experiment,
would be interesting to see how that
al resisted the heavy traffic to which the
as subjected.

H. P. Boulnois, M.Inst.C.E., read a
in which he surveyed the whole field of
ipal activity and pointed out where
nies might be effected. As regarded
and streets, he said that all road engineers
agreed that any large curtailment of
diture in this direction would inevitably
a much heavier expenditure in the near
. They might to some extent economise
ferring the resurfacing of a road and
g the existing surface in repair. Tar-
ng should be proceeded with on all
the surfaces of which were in fair repair.
wood-block pavement had worn to an
that renewal seemed imperative, it was
imes an economy to reverse the blocks
et a further life of four or five years out
em. Women had been employed with
erable success in some towns as street
ers, the only fault being that they were
rticular in cleansing the street like they
their own back yard. Street watering
be reduced to some extent, but it was
difficult to define the boundary between
and necessity with regard to this service.
uld be false economy to attempt to
ish the scavenging service, but a great
could be effected if householders would
more of the refuse. If a simple domestic
tor could be designed to be attached to
a gas or coal kitchen range it would
assist in a much needed reform. Any
nies in the direction of sewerage and
disposal should receive very careful
eration, or the standard of sanitation
be seriously lowered. Whether the
of stopping contracts which had been entered into on favourable terms would result in an eventual economy was very doubtful if the works had to be finished hereafter, as the trend of all prices was in an upward direction and they were not likely to come down after the war. The only economies which the water engineer could practise was a closer supervision of the pumping station, filter-beds, etc.; but the public could materially assist if they would prevent the excessive waste of water that occurred in all homes and establishments. The work of clearing slum areas must, he feared, be suspended during the war, not only from the difficulty of procuring housing accommodation for the people turned out of their homes, but also the great expense incurred in these operations. Greater vigilance must be exercised temporarily by the health officers in such districts, and very glaring isolated cases dealt with. With regard to "Housing," this would loom large after the war, even if it had not already done so. They heard on all sides of the present dearth of houses for the working classes, aggravated by the establishment of munition works, etc.; but what was to be done? The great rise in the value of labour, materials, and haulage was likely to continue, and every day it would become more difficult to build cheap houses at suitable rents. This, to his mind, was the one great line in which the war would seriously affect the question of the maintenance of the standard of sanitation, and, unless some scheme could be introduced whereby the employers of labour would be held responsible for the provision of suitable houses for their employees, he did not see how the problem was to be solved. The subject was deeply interesting, but would require a paper to itself to properly discuss. A large number of branch libraries and reading-rooms might be closed altogether, and perhaps even all such places, as well as museums. An example in this direction had been given in London by the closing or partial closing of a number of museums. In any case the purchase of books, specimens, and exhibits could be postponed. In some cases the general markets might be closed, or at all events less expensively managed and maintained. Economies in heating, lighting, etc., could be practised in all public buildings, and evening meetings of all kinds should be discouraged. The author also advocated the cutting down of unremunerative tramway services, the utilisation of conservatories, etc., in parks, and forcing houses for vegetables, and various general economies in regard to printing, etc.

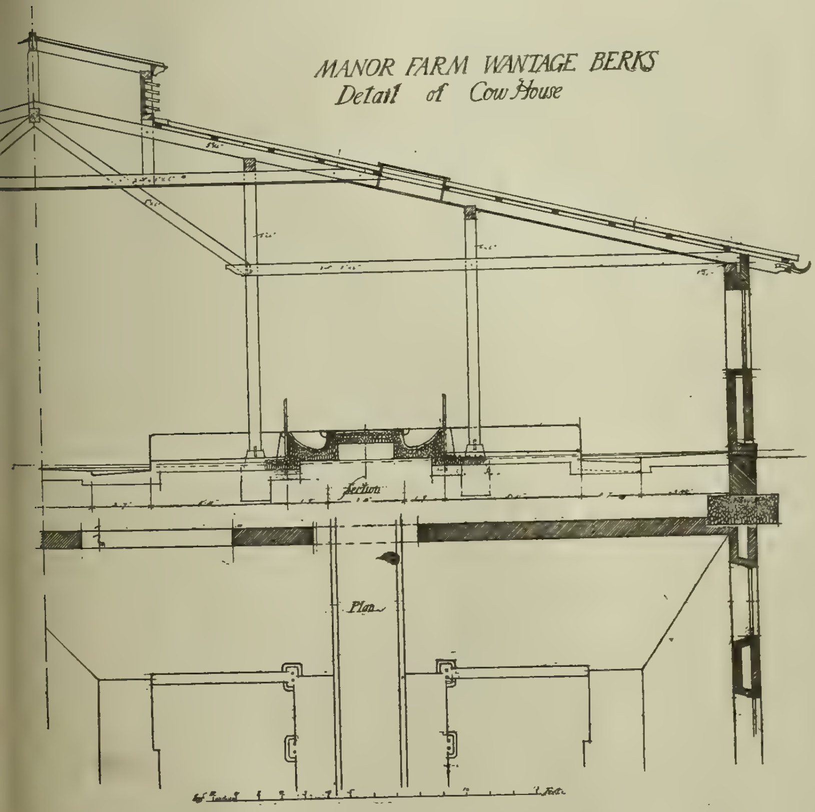


Fig. 9. Design and Construction of Cow-Houses. (*See page* 440.)

Dr. James Wheatley (Medical Officer of Health for Shropshire) followed with a paper which dealt with the question of economy from the medical point of view, and urged the desirability of not neglecting scavenging if the health of the children was to be preserved.

Considerable discussion took place, which followed largely on the line of the danger to health if excessive economy in sanitation was practised.

Dr. Carr (Newcastle-on-Tyne) suggested that local authorities ought to have more control over the plans of houses erected for munition workers. They had had a large number erected in their district, and, thanks to the courtesy of the contractors, they had been able to influence them in several matters, but in regard to drains they were "up against them"! The result was that, whilst in a large area the drainage now was fairly efficient, it would not be efficient after the war or for any extension of the present area.

Major A. J. Martin thought that as men were conscripted for the trenches those left at home ought to be called upon to do the work of scavenging the roads and other like work.

Mr. Chapman (Holborn) expressed the hope that local authorities would set aside money in these times for the work which would be required later. Holborn had set aside £5,000 for roads.

Alderman Todd (Gateshead), Dr. Nash (Norfolk), Dr. Miller (Hereford), Dr. Boobbyer (Nottingham), the Rev. F. Darmody (Wolverhampton), Mr. Cotterill (London), and Dr. Jones (Hereford) also took part in the discussion, and it was decided to ask the Council of the Institute to consider what temporary extension of local powers were necessary in order to economise labour in the public health service and to make it more efficient.

The meeting concluded after votes of thanks to the readers of papers had been heartily agreed to.

◆

WORKMEN'S HALL, SHEFFIELD.

A new workmen's hall has recently been opened at the Tinsley colony in Bawtry-road, Sheffield. An area of 31 acres has been laid in streets and covered with forty-seven blocks of single-storied wooden buildings containing 199 houses for families; fifty-three hostels, each to accommodate thirteen workers and a caretaker; fourteen other hostels, each for twenty-eight workers; and three colony groups, each for 120 workers, who will get their meals in special restaurants. The hall, which will seat about 360 persons, is to be used for recreative and social purposes, and for religious services. The City Architect, Mr. F. E. Edwards, has undertaken the work of arranging for the colonies.

THE BUILDING TRADE.

THE CUTTING OF GALVANISED-IRON.

We have received the following interesting letter from Sir John Cockburn:—

"Sir,—I recently had occasion to take to pieces for the purpose of re-erection elsewhere a large galvanised-iron shed, and, as an unexpected difficulty was encountered, perhaps some account of the manner in which it was overcome may be of service to those who find it necessary to undertake work of a similar nature. The wooden framework of the structure was slight, the necessary strength being obtained by innumerable mushroom-headed $\frac{5}{16}$-in. screw bolts, by which the sides of the corrugated sheets and their ends in the curved roof were riveted together. The nuts of these were found to be rusted so fast on the threads that, with few exceptions, all attempts to unscrew them, even after copious paraffin and oiling, were futile. An attempt was made to separate the sheets by cutting through the bolts or splitting the nuts with cold chisels, but progress was so slow and the damage to the iron so great that this had to be abandoned. No better success attended the use of hack saws. Bolt croppers were tried, but it was found impossible to insert the jaws of these either outside or inside. Many machinists were consulted without avail. At last I came to the conclusion that what was required was a bolt cropper with pincer jaws not more than $\frac{3}{8}$-in. wide and capable of opening wide enough to pass over the nuts on the inside, so as to seize and divide the bolt within the hollow of the corrugated-iron. There was, however, no such tool to be obtained in London. Eventually Messrs. Buck & Hickman, 2, Whitechapel-road, made one for me by converting a pair of the shear jaws of Porter's No. 2 "New Easy" Bolt Clipper into pincer jaws. With this the nuts were snipped off almost as easily as one gathers blackberries, and the job was finished in a very short time without the slightest damage to the iron. John A. Cockburn."

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The Plans Committee of the T.C. has approved of the following new buildings in Aberdeen:—Alterations and additions in connection with premises on the north side of Spring Garden, for Messrs. W. M'Kinnon & Co., Ltd., engineers, per Mr. George Coutts, architect; offices, York-place, for Messrs. Hall, Russell, & Co., Ltd., per Mr A. H. L. Mackinnon, architect; petrol store in connection with Phœnix Works, Russell-road, for Messrs. W. Riddell & Co., oil merchants; shelter in connection with Grammar School recreation ground, Harlaw-road, for the Aberdeen School Board, per Messrs. Walker & Duncan, architects; stable, Wellington-street, for Mr. Alexander Walker, carting contractor, per Mr. John Rust, architect; alterations in connection with the premises, Nos. 77 and 79, Crown-street, for Messrs. Mackenzie & Wilson, advocates, per Mr. W. J. Devlin; temporary building in connection with St. Fittick's Church, Walker-road, per Mr. James Clark, session clerk; temporary building (boiler house) in connection with King's College, for the University Court, per Mr. D. R. Thom, Secretary to the University; plan of coal sheds, Regent-road, for Messrs. Ellis & M'Hardy, coal merchants, per Messrs. Kelly & Nicol, architects.

Beaconsfield.—The U.D.C has passed the following plans:—Building plan, house, Curzon-avenue, Mr. E. H. Goodyear; drainage plans, The Firs, Burke's-road, Mr. T. G. Cowan; the Gas House, Station-road, Uxbridge Gas Company; Mordeen, Reynolds'-road, Mrs. Garth.

Burnley.—The Burnley Borough Surveyor has been instructed to draw plans and estimates of a building for a central reference and reading library.

Cambuskenneth.—The Patrons of Cowane's Hospital have adjusted the articles of roup of ground at Cambuskenneth. The ground has been feued to Mr. John Fraser, architect, Dunfermline, on behalf of a company for the erection of houses of the class suitable for miners.

Canada.—The Imperial Trade Correspondent at Toronto reports that a company which has been operating two stores in that city for many years is increasing its capital to 7,500,000 dollars for the purpose of erecting new premises and acquiring a departmental store at Montreal as a subsidiary enterprise.

Derby.—The Improvement and Construction Committee of the T.C. has approved ten building plans.

Dundee.—Plans passed by the T.C.:—Byron-street, boiler-house for Messrs. Francis Stevenson & Sons; West-street, alterations on warehouse for Messrs. Francis Stevenson & Sons; Yeaman Shore, shed for Messrs. Nicoll & Son.

Girvan.—Girvan T.C. recently considered a petition from the proprietor of Bargany Estate for warrant to lay-out two new streets between Montgomerie-street and the railway. It was stated that miners' houses are to be built on the new streets, and that it was necessary that the erection of these houses should be proceeded with at once. The Council continued the petition for a week in order to suggest several modifications of the plans.

Glamorgan.—At a recent meeting of the Glamorgan Roads and Bridges Committee it was stated that the Roads Board was prepared to make a grant of £6,000 towards the cost of tar-spraying and tar-macadamising the roads in the county during the year. It was stated that the proposed road improvement near the Cow and Snuffers Hotel, Llandaff North, was to be proceeded with forthwith. The Surveyor added that it was proposed to spend altogether about £13,500 on road repairs during the year.

Glasgow.—Glasgow Dean of Guild Court has granted the following linings:—The Cassel Cyanide Company, Ltd., 19, St. Vincent-place, to erect an extension to their works in Shuna-street; Messrs. Millers, Ltd., tanners, 847, Duke-street, to erect a new boiler shed; Messrs. Frederick Braby & Co., Ltd., Petershill-road, to extend their sheet mill; Messrs. Barr & Stroud, Ltd., engineers, to erect workshop sheds at Caxton-street, Anniesland; Messrs. Andrew Brown & Son, rope manufacturers, 52, Bellfield-street, to erect workshop, office, and store; Messrs. George Christie, Ltd., 197, Broomloan-road, Govan, to add to their works; Messrs. David Carlaw & Sons, engineers, 11, Finnieston-street, to construct an additional story in Houldsworth-street.

Grimsby.—The R.D.C. has passed a plan for a new temporary mortuary near the Police Station at Immingham.

Kensington.—The Licensing Justices have passed plans of alterations intended to be carried out in the Portobello Tavern, 138, Portobello-road, Kensington.

Kinghorn.—A glass-blowing establishment at Kinghorn are extending their premises at a cost of £13,000.

London.—The Licensing Justices have passed plans of alterations to the Rose and Crown, Union-street, St. George, Mr. D. Aylott, licensee, and the Angel, Upper Ground-street, Christchurch, licensee, Mr. J. Donaghy.

Marsden.—The Health, Sanitary, and New Buildings Committee has approved the plan of a workshop in Peel-street for Mr. James Schofield.

Middlesbrough.—At the recent conference of local ironmasters, employers of labour, and education authorities of Durham and the North Riding, held at Middlesbrough, a scheme was launched for the establishment of a technical college at Middlesbrough.

Newcastle.—Plans for the erection of a new electric power station have been approved by the U.D.C.

Ramsgate.—The T.C has approved plans for the erection of a female staff and officers' room, Ramsgate Brewery, owners, Messrs. Tomson & Wotton, Ltd.; and for alteration at 15, Albion-place, owner, Mr. Dicker.

Ravensthorpe.—The Yorkshire Electric Power Company contemplates making extensions to its central station at Ravensthorpe at an expenditure of £100,000.

Redhill.—The Reigate T.C. has approved plans from Messrs. Love & Malcolmson, Ltd., for the reconstruction of the Athenæum Printing Works, Redhill.

Southwick.—At a recent meeting of the Southwick-on-Wear U.C. a plan was approved for the erection of an electric power sub-station a Southwick yard of Messrs. Swan, Hunte Wigham Richardson. The firm are exten their premises and making provision for ex ing more work.

Tunbridge Wells.—The Burial Board mittee of the T.C. has decided to tar pain paths at the cemetery, at a cost of £165.

Wantage.—At a recent meeting of the R. tenders were received for laying a drain at combe Regis for dealing with the flooding t and referred to a committee to deal with report. It was also resolved that an applic be made to the L.G.B. for sanction to borro sum of £2,550 to carry out a scheme of drai for the parish of Letcombe Regis. The Surv has been instructed by the U.D.C. to tar Church-street in addition to the streets us treated.

WAGES IN THE BUILDIN TRADE.

Dublin.—The following are particular advances in wages or war bonuses give the various trades from October 18, 191 June 9, 1916, with the various dates came into operation:—Labourers: War b at the rate of 6d. per day for each day wo provided no time is lost by default of work Came into operation October, 1915. tricians: Increase from $9\frac{1}{4}$d. to $9\frac{3}{4}$d. per h when working the winter hours, $10\frac{3}{4}$d. engaged on War Office work or work dir controlled by the War Office to be pai addition to this a war bonus of 3s. per wee 6d. per day or any part thereof. Came operation November 22, 1915. Brassfoun Finishers, and Gasfitters: Increase from per week to 38s. per week from April 1, Carpenters: Increase from 9d. to $9\frac{3}{4}$d. May 12, 1916, and a further $\frac{1}{4}$d. on June 27, bringing the rate up to 10d. Brickla Increase of $\frac{1}{2}$d. per hour, making the wages per hour, and in addition a further $\frac{1}{2}$d. hour war bonus. The wages therefore be $10\frac{1}{2}$d. per hour until the next pay day peace is signed, after which the rate wi 10d. per hour. The wages and war bonus into operation on May 19, 1916. Overtim be computed at the 10d. rate. Painters: bonus to be at the rate of 4d. per day for day worked, provided no time is lost by de of workman. Apprentices to be 2d. per under same conditions. Bonus to be pai week ending June 3, 1916. Plaste Increase from 9d. per hour to $9\frac{3}{4}$d. (fifty- week) and a war bonus of $\frac{1}{4}$d. per hour d the continuance of the present war, bri the wages to 10d. until next pay day peace is signed. Overtime to be comp at the $9\frac{3}{4}$d. rate. The increase to come operation as from May 22, 1916.

Portsmouth.—At the recent qua meeting of the South-Eastern Centre Boa Conciliation for the Building Trades an a was heard from the following trades in district:—Carpenters and joiners, brickla masons, plasterers, painters, plumbers, na and labourers, for advance of wages alterations of rules. The appellants' case stated by Messrs. Healy and Lacey (carpe and joiners), Penn (bricklayers), and Pe and Glasgow (painters). The demand wa an advance of wages of $1\frac{1}{2}$d. per hour i case of carpenters and joiners, brickla plasterers, and masons, and of 2d. per in the case of plumbers, painters, na and labourers, and was based upon increased cost of living and excep conditions prevailing. The demand inc a new rule for an extra rate for men ployed on silicate-cotton work, an additi the rule as to shaft and steeple work to extend it to buildings and works of struction, and a further addition for fire and work in confined spaces, an alterati the overtime rate on Saturdays, and a rule to provide for night-gang work. appellants made a strong point of the adv already conceded in other towns during twelve months or so, and urged that the conditions had in effect taken away from n the purchasing power which their wages ı-rly gave them, and they asked that it be ially restored to them by the advance of es, etc., demanded. For the employers srs. Priyett, Salter, Coghlan, and Roskell eared, and in their reply traversed the uments of the appellants. They agreed erally as to the increased cost of living, and neet the views of the operatives they now gested that the summer working hours ıld be increased and the increase paid at time and a quarter. After answering stions the parties retired, and the Board sidered and decided the case as follows:—

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* See also our list of Competitions, Contracts, etc., on page 446.

hat this Board, having heard the case from employees and employers of Portsmouth, eby decides that the case will be met by the ment of 2s. 6d. per week as war bonus, as n May 1, 1916, which bonus shall cease e months after peace is declared, no bonus be paid until a full week has been made ept where time is lost by stress of weather."

Board then considered and settled remainder of the operatives' demands ollows:—Rule 2: Rates of wages as before s war bonus as per resolution given above. posed new rule *re* silicate-cotton work ck out. Rule 3: Rule to remain as before h the addition, "That all men engaged on ert work receive ½d. per hour extra, and men on hot work 2d. per hour extra, such es to be cooled down below 120 deg. before ng repaired." Rule 5: Rule to remain as ore, but with the overtime rate on Saturdays ied so that the rate from 12 noon to 8 p.m. ll be paid for at time and a half, after 8 p.m. ble time. Also the addition of the following o night gangs:—"Men engaged on a night g to be paid 1d. per hour in addition to the inary rate of wages, but the hours worked hout overtime rates not to exceed fifty week, being ten hours each night for five hts during summer, and not to exceed y-five per week, being nine hours each night five nights during winter. Meal-time rs during the night to be one and a half. m Saturday midnight to Sunday midnight, ble time. Any time worked by a night gang ween leaving off time on Saturday morning starting time Monday night shall be paid according to the following rates:—The t four hours worked on Saturday, time and half, afterwards double time till starting e on Monday night, at night gang rates."

TRADE NEWS.

he Sherburn Picture Hall, Hull, is being plied with Shorland's special inlet ventilators Messrs. E. H. Shorland & Brother, Ltd., of lsworth, Manchester.

oyle's latest patent "air-pump" ventilators latest improved air-inlet brackets have n adopted for the offices of Messrs. Engert & lfe, Ltd., at Barchester-street, Poplar, E.

Ve have received a copy of a new price list Clincher Band Solid Rubber Tyres, just ued by the North British Rubber Comny, Ltd., Castle Mills, Edinburgh. These es are supplied for use in the United Kingn, and are guaranteed for 10,000 miles' vice. The price list shows patterns of the es.

'Coatostone" has been ordered by His ghness Maharajah Alwar for internal and ernal treatment of Seriska Palace, India, and same has been exported by the Stone eservation Company, Ltd., of 9a, Little mes-street, Gray's Inn, W.C., who have rchased the Coatostone Decoration Company, d are now the sole proprietors and manuturers of "Coatostone."

Vith reference to the particulars of an proved window fitting which appeared in r last issue, it should have been stated that patent referred to has passed beyond the visional stage, the complete specification ving been accepted and the patent sealed. e present address of the patentee (Mr. J. anford) is "Ledbury," 3, Hardwicke-road, igate, Surrey.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9½	9½	9½	9½	9½	9	8	6½	6½	6½
Accrington	10	10	10	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	10	7	7	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	1/-	1/-	1/-	11	11	1/-	9½	8	8	8
Birmingham	11½	11½	11½	11½	10½	11¾	10¼	8½	8½	8½
Bishop Auckland	9	9	9	9½	10‡	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	11	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10½	11	10½	10½	10	10†	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10¼	10½	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9½	9½	9½	10	9	9½	8¾	7	7	7
Bury	11	11	10½	9	10	10½	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	8¾	—	8¾	8¼	6	6	6
Chester	9½	10	10	9¾	9¾	10¼	9¼	6¼	7	6½
Chesterfield	9	9½	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	10	10	9	9	9½	8	7	7	7½
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7½	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9½	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	9¼	7	7	7
Harrogate	9½	9½	9½	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¼	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10¾	10½	10½	10½	10	10	9	8½	8½	8½
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9½	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6¾	6¾	6¾
Leeds	10¾	10¾	10¼	10½	10½	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10½	9	8	8	8½
Lincoln	9	9½	9½	9	8½	8½	8	6	5½	6½
Liverpool	1/-	1/-	1/-	11	11½	1/-	10½	8	8	8
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	9	9	9	8½	8½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	10	9½	8½	—	9½	9	7	7	7
Merthyr Tydfil	9½	9½	9½	9½	9½	9	8½	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9½	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	11	10	8½	8½	9
Oldham	11	11	11	10	9	10	9½	7½	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8½	6½*	6½*	6½*
Pontypridd	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Portsmouth	9½‡	9½‡	9½‡	9½‡	9½	8½‡	7½	7‡	7‡	7‡
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7½
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10½	10	9¼	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	10	10	10	10¼	8¾	10	9	6¾	6¾	6¾
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10†	9¾	9¾	9½	10¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7½
Shrewsbury	8½	9¼	9¼	9½	—	8½	7	6¼	6¼	6¾
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	10½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¼	6½	7	7½
Stockton-on-Tees	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	8	8	8	8	7½	7½	7½	6	6	6
Sunderland	11	11	11	11	10‡	9½	9½	7¼	7¼	7½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	9	7	7	7
Walsall	10	9½	9½	9½	8½	10	8½	7¼	7¼	7½
Warrington	8¾	10½	10¼	10½	8½	10¼	9½	6¾	6¾	6¾
West Bromwich	10½	10½	10	10¼	—	9½	8	7½	7½	7½
Wigan	10½	11	10	10	9½	10¼	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	10½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	8	6½	6½	6½
York	9¾	9¾	9½	9½	9½	9½	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 2s. 6d. per week granted

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv., vi.; Public Appointments, xxii.; Auction Sales, xxiv. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁎ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 16.—**Troedyrhiw.**—RENOVATING.—For renovating Nazareth Chapel, Troedyrhiw. Specification, etc., at 112, High-street, Merthyr. Mr. C. M. Davies, M.S.A.

JUNE 19.—**Banteer.**—CREAMERY.—The Committee of the Banteer Co-operative Creamery invites tenders for the erection of a central creamery at Banteer. Plans and specification with the Secretary, Mr. Jeremiah Sheehan, Banteer, Co. Cork.

JUNE 19.—**Ebbw Vale.**—PAINTING.—The Ebbw Vale E.C. invites tenders for the following works:—Contract A.—To paint the whole of the outside woodwork and ironwork at the Willowtown Schools, Ebbw Vale. Contract B.—To paint the whole of the outside woodwork at the Duffryn School, Cwm. Specifications, etc., at the office of Mr. T. J. Thomas, the Town Surveyor.

JUNE 20.—**Dublin.**—PLUMBING, ETC.—For plumbing and gasfitting works and supplies required at the buildings in the Dublin district in charge of the Commissioners of Public Works for a period of one year. Forms of tender, etc., of Mr. H. Williams, Secretary, Office of Public Works, Dublin. Deposit, £1.

JUNE 20.—**Hunslet.**—BRICKLAYERS', ETC., WORK.—The Guardians invite tenders for bricklayers', joiners', plumbers', and ironmongers' work for three months. Tender forms of Mr. Fred W. Mee, Clerk to the Guardians, Union Offices, Glasshouse-street, Hunslet.

JUNE 20.—**Liverpool.**—PAINTING.—The Select Vestry invite tenders for cleaning down and painting work at the Highfield Military Hospital, Knotty Ash. Tender forms, etc., of the Clerk to the Select Vestry, Parish Offices, Brownlow-hill, Liverpool.

JUNE 20.—**Oldham.**—PAINTING.—The Free Libraries Committee invites tenders for painting the outside woodwork, etc., at the Central Library and Art Gallery. Specification, etc., at the office of the Borough Librarian.

JUNE 20.—**Wigan.**—EXTENSIONS.—The Electricity Committee of the Corporation invite tenders for the erection of extension to boiler-house:—Contract No. 1, concrete foundations, brickwork, joinery, plumbing, slating, etc.; and Contract No. 2, steel construction work. Specification, etc., from Mr. A. T. Gooseman, Borough Engineer, Wigan. Deposit, £1 1s.

JUNE 21.—**Redruth.**—PAINTING.—For painting to be done at the following schools:—Troon Roskear, Cusgarne, Barncoose, Carnkie, Illogan, Nancekuke, Pool, East Enf, Treleigh, for the Redruth and Camborne District E.C. Specifications at the Education Office, Redruth.

JUNE 22.—**Longniddry.**—COTTAGES.—The Scottish Veterans' Garden City Association invites tenders for the whole or any of the work required in the erection of cottages at Longniddry. Plans, etc., at the office of the architects, Messrs. Henry & MacLennan, 7, South Charlotte-street, Edinburgh. Deposit, £1.

JUNE 22.—**Manchester.**—PAINTING.—The Gas Committee invites tenders for painting of buildings and plant at the Droylsden Gas Works. Specification, etc., of Mr. Fredk. A. Price, Superintendent, Gas Department, Town Hall, Manchester. The buildings and plant may be inspected on application to the Engineer, Mr. J. G. Newbigging, M.Inst.C.E., at his office, Rochdale-road Station.

JUNE 27.—**Carlisle.**—HOSTEL.—The Directors of the North-Eastern Railway invite tenders for the erection of hostel for trainmen at Carlisle. Plans, etc., of the Goods Agent, N.E. Railway, Carlisle. Quantities from Mr. Arthur Pollard, the Company's Architect, at York

✱ JUNE 27.—**Isleworth.**—PAINTING.—The Brentford Guardians invite tenders for painting at their buildings at Isleworth.

JUNE 29.—**Sunderland.**—REPAIRS.—For making good considerable damage at the Wheat Sheaf Car Depot. Particulars from the General Manager, Tramway Offices, Monkwearmouth.

JULY 3.—**Southampton.**—PAINTING.—The Southampton Harbour Board invite tenders for painting warehouses and cranes for Town Quay, Southampton. Specification, etc., of the Board's Engineer, Harbour Offices, Town Quay, Southampton. Deposit, £1.

JULY 8.—**Kilkenny.**—BRIDGE.—The Counties of Kilkenny and Wexford invite tenders for the building of a bridge in reinforced concrete over the River Barrow at Ferry Mountgarrett, together with accessory works. Plans, etc., of Messrs. Delap & Waller, 115, Grafton-street, Dublin, or of Mr. A. M. Burden, County Surveyor, Kilkenny. Deposit, £20.

JULY 10.—**Harwich.**—REFUSE DESTRUCTOR.—For the design and construction of a refuse destructor. Sketch plan of site and general conditions of Mr. F. Harold French, Borough Surveyor, Harwich. Deposit, £1 1s.

NO DATE.—**Aspull (Lancs).**—RESLATING, ETC.—For reslating shop and pointing. Particulars of Mr. W. Byrom, 15, Smith-street, Haigh-road, Aspull.

NO DATE.—**Cork.**—ALTERATIONS, ETC.—For sundry alterations and repairs, and from plumbers for plumbing and sanitary work proposed to be carried out at the Refuge Laundry, Cork, for the Committee of the Buckingham House Free School, Cork. Particulars from Messrs. Robert Walker & Son, architects, Cork.

NO DATE.—**Leeds.**—DEMOLITION, ETC.—For the demolition and re-erection of buildings in Hunslet-road, Leeds, for Messrs. Clemens, Marshall, & Carbert. Quantities of Mr. C. Castelow, A.R.I.B.A., Red Hall Chambers, Guildford-street, Leeds.

FURNITURE, MATERIALS, etc.

JUNE 17.—**Kingston-upon-Hull.**—MATERIALS.—Supply to the Guardians of Kingston-upon-Hull Incorporation for the Poor of paints, oils, colours, etc. Forms of tender of Mr. Robert H. Winter, Solicitor, Clerk to the Guardians, St. Mary's Chambers, Lowgate, Hull.

JUNE 19.—**Leicester.**—MATERIALS.—Supply to the B.G. of building materials. Forms of tender of Mr. Herbert Mansfield, Clerk, Poor Law Offices, Leicester.

JUNE 20.—**Brighton.**—MATERIALS.—Supply to the Guardians of builders' materials. Forms of tender, etc., at the Guardians' Clerk's Office, Prince's-street.

JUNE 21.—**Bristol.**—MATERIALS.—Supply to the B.G. of builders' materials. Forms of tender of Mr. J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol.

JUNE 21.—**Derby.**—WHITE LEAD, ETC.—Supply to the Derby County Asylum, Mickleover, near Derby, of white lead, oils, etc., for six months. Tender forms of the Clerk and Steward of the Asylum.

JUNE 22.—**Dewsbury.**—OILS AND PAINTS.—Supply to the Guardians of oils and paints for three months. Forms of tender of Mr. C. P. Pickersgill, Clerk to the Guardians, Union Offices, Wellington-street, Dewsbury.

JUNE 26.—**Salford.**—MATERIALS.—Supply to the Electricity Department of builders' materials. Specifications, etc., from Borough Electrical Engineer, Electricity Works, Frederick-road, Salford.

JUNE 30.—**Powick.**—PAINTS AND OILS, ETC.—Supply to the Committee of Visitors of Worcester County and City Asylum, Powick, of paints and oils, etc. Forms of tender from the Storekeeper.

SEPTEMBER 6.—**Aberaman.**—OILS, PAINTS, ETC.—Supply to the Directors of the Powell Duffryn Steam Coal Company, Ltd., of grease and oils, paints, etc. Forms of tender, etc., of the Stores Manager, Aberaman Offices, near Aberdare.

NO DATE.—**Grangemouth.**—MATERIALS.—Supply to the B.C. of builders' materials Schedules on application to the Subscriber. Mr. David A. Donald, C.E., Burgh Engineer, Burgh Engineer's Office, Town Hall, Grangemouth.

ENGINEERING, IRON, AND STEE

JUNE 17.—**Halifax.**—STEELWORK.—The tricity Committee of the Halifax Corpor invite tenders for the supply and erectio steelwork over the dam at the Electricity W Specifications, etc., of Mr. James L M.Inst.C.E., Borough Engineer, Town Halifax. Deposit, £1.

JUNE 19.—**Sedgley.**—GAS MAIN.—For the ing of about 600 yds. of 12-in. C.I. gas main the U.D.C. Particulars of Mr. Thomas Knight, Clerk of the Council, Council Ho Sedgley.

JUNE 22.—**Southampton.**—ALTERATIONS HEATING SYSTEM.—The Public Libraries mittee invite tenders for alterations to Central Library heating system. Specificat etc., at the office of the Borough Engin 123, High-street, Southampton.

JUNE 26.—**Salford.**—CONVEYORS AND BUNK ETC.—Supply to the Electricity Departmen conveyors and bunkers, foundations for boi steam and water piping. Particulars from Borough Electrical Engineer, Electricity Wo Salford.

JULY 3.—**Southampton.**—CONDUIT.— Southampton Harbour Board invites tenders constructing a conduit for electric mains, T Quay, Southampton. Specification, etc., of Board's Engineer, at the Board Offices, T Quay, Southampton. Deposit, £1.

JULY 10.—**Shortlands.**—BOILERS.—The M politan Water Board invite tenders for the m facture and erection of two Lancashire boi together with economiser, superheaters, pip feed pump, and other contingent work, at Shortlands Pumping Station, Valley-road, Sh lands, Kent. Forms of tender, etc., at the of the Board, Savoy-court, Strand, London, (Engineer's Department). Deposit, £1 1s.

✱ NO DATE.—**Shanghai.**—HEATING PLANT.— Shanghai Municipal Council invite tenders installation of heating plant in the new cen offices.

ROAD, SANITARY, AND WATER WORKS.

JUNE 19.—**Dalmeny.**—WATER SUPPLY IMPR MENT.—The Linlithgow District Committee o C.C. of Linlithgow are prepared to re tenders for cutting and refilling tracks for laying and jointing about 6,500 yds. of 3-in. 2-in. cast-iron pipes for the improvement of water supply to Dalmeny Hospital. Plans, at the office of the Engineers, Messrs. J. Leslie & Reid, C.E., 72A, George-street, E burgh. Deposit, £1.

JUNE 21.—**Erith.**—SEWERS, ETC.—For the la of cast-iron and stoneware sewers and air the construction of an ejector chamber, and installation of three ejectors, and other dental work for the U.D.C. Plans, etc., the Surveyor to the Council, Council Of Erith. Deposit, £2 2s.

JULY 3.—**Ealing.**—STONEWARE PIPES, Supply to the T.C. of stoneware pipes, Tender forms, etc., of Mr. J. Douglas Kn A.M.Inst.C.E., M.I.M.E., M.I.E.E., Borough Electrical Engineer and Manager, tricity Supply Department, Town Hall, Ea W.

Public Appointment.

✱ NO DATE.—TEMPORARY CLERK.—The M politan Borough of Holborn invite applica for the above post.

Auction Sales.

✱ JUNE 20.—**Deptford.**—Messrs. Jenkins, & Webster will sell by auction, on the pren the machinery, plant, and freehold premis a builder and contractor.

✱ JUNE 21.—**Blackheath.**—Messrs. Dyer, & Hilton will sell by auction, at the Ma freehold building estate.

✱ JUNE 28.—Messrs. Churchill & Sim wil by auction, at the Great Hall, Winch House, Old Broad-street, E.C., an assortme deals, battens, boards, timbers, etc.

[Those with an asterisk (*) are advertised in this issue.]

ES CURRENT OF MATERIALS.

g to the exceptional circumstances which at the present time, prices of materials be confirmed by inquiry.]

n Bricks have advanced since our last issue.—Ed.

aim in this list is to give, as far as possible, the prices of materials, not necessarily the highest st. Quality and quantity obviously affect prices t which should be remembered by those who se of this information.

BRICKS, &c.

1000 Alongside, in River Thames.	£ s. d.
ocks	2 0 0
Stocks for Facings	2 12 0

1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
s	1 13 0	Best Blue Pressed Staffordshire	5 0 0
Fareham	3 12 0	Do. Bullnose	5 5 0
d Pressed on Facing	5 5 0	Best Stourbridge Fire Bricks	4 15 0

Bricks—

	£ s. d.		£ s. d.
White, , and Glazed		D'ble Str'tch'rs	18 17 6
		Double Headers	15 17 6
chers	13 7 6	One Side and two Ends	19 17 6
s	12 17 6	Two Sides and one End	20 17 6
Bullnose 4½ in.	16 17 6	Splays and Squints	18 7 6

econd Quality £1 per 1,000 less than best.

	s. d.	
s Ballast	8 3	per yard, delivered.
s and Pit Sand	8 6	„ „ „
ashed Sand	9 6	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
ortland Cement	2 5 0	..	2 8 0

£2 1s. alongside in 80-ton lots.

ete 2s. 6d. per ton extra on above.

round Blue Lias Lime .. 1 5 6 at rly. depôt.

—The cement or lime is exclusive of the ordinary charge for sacks.

tone Lime .... 18s. 0d. per yard delivered.

ridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

Stone—delivered in railway trucks at tbourne Park, Paddington, G.W.R., or h Lambeth, G.W.R., per ft. cube	s. d. 1 7
. delivered in railway trucks at Nine Elms, S.W.R., per ft. cube	1 8¼
. delivered on road waggons, at Nine Elms ôt	1 9¼

and Stone—

wn Whitbed, in random blocks of 20 ft. erage, delivered in railway trucks at estbourne Park, G.W.R., South Lambeth, .W.R., or Nine Elms, or L. & S.W.R., per . cube	2 5¼
do. delivered on road waggons at Pimlico harf or Nine Elms Depôt, per ft. cube	2 6½

te basebed, 2d. per ft. cube extra.

om Blocks—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
ter in blocks	2 0	Closeburn Red Freestone	2 2
n blocks	1 7¼	Red and White Mansfield Random block	2 9
ill in blocks	2 4	Yellow Magnesian Limestone do. do.	3 3
y Dale in cks	2 5		

Stone—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
led random blocks	3 4
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landings to sizes (under ft. super.)	2 5
rubbed two sides, ditto	2 8
sawn two sides slabs (random sizes)	1 0½
o 2½ in. sawn one side slabs (random sizes)	0 8¼
to 2 in. ditto, ditto	0 6¾

York—

Per Ft. Cube, Delivered at Railway Depôt.	
bled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landing to sizes (under 40 ft. per.)	2 3
rubbed two sides ditto	2 7
sawn two sides slabs (random sizes)	1 0
self-faced random flags	0 5

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
machine-made tiles or hand-made sanded tiles from either Broseley or affordshire district	2 12 6
mental ditto	2 15 0
and valley tiles (per dozen)	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£ s. d.
Blue Bangor Slates, 20 by 10	11 16 0
quality „ „	11 10 0
„ „ 16 by 8	5 15 0
Blue Portmadoc, 20 by 10	11 13 6
quality „ „	11 3 6
„ „ 16 by 8	5 15 0

WOOD.

Building Redwood. Nominal.

Imported sizes. Per standard.

	£ s. d.		£ s. d.
s: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., in. by 9 in., and 2 in. by 11 in.	35 0 0	..	36 0 0
in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	34 0 0	..	35 0 0

WOOD (*Continued*).

Best Building Redwood. Per standard.

	£ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	33 0 0	..	34 0 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.	
¾ in.	1 0 0	more than battens.	
Seconds	1 0 0	less than best	
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 10 0 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	13 0 0	..	14 0 0
Do. 6 in. to 10 in.	11 0 0	..	12 0 0
	Per standard.		
Best Pitch Pine Deals	35 0 0	..	36 0 0
Under 2 in. thick	0 10 0	extra.	

Joiners' Wood.

	£ s. d.		£ s. d.
White Sea First Quality Red: 4 in. by 11 in.	40 0 0	..	41 0 0
3 in. by 11 in., and 2 in. by 11 in.	39 0 0	..	40 0 0
4 in. by 9 in.	38 0 0	..	39 0 0
3 in. by 9 in., and 2½ in. by 9 in.	37 0 0	..	38 0 0
9 in. by 11 in. boards	1 0 0	more than deals.	
7 in. and 8 in. battens	34 0 0	..	35 0 0
7 in. and 8 in. boards	1 0 0	more than battens.	
Archangel White Deals—Best 5 in. by 9 in. and 10 in. and 11 in.	37 0 0	..	38 0 0
Seconds, do.	2 0 0	less than best.	
U.S. Battens	31 0 0	..	33 0 0

Prepared Floorings and Matchings, Seconds Swedish Red and equal—

	Per square actual.		
1¼ in. by 6½ in. planed and shot	1 16 0	..	1 19 0
1¼ in. by 6½ in. planed and matched	1 16 6	..	1 19 6
1 in. by 6½ in. planed and shot	1 9 0	..	1 12 0
1 in. by 6½ in. planed and matched	1 9 6	..	1 12 6
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1 4 0	..	1 6 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
	Per standard.		
Columbian or Oregon Pine, best quality	42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0	upwards.	
Oddments	39 0 0	„	
Seconds, regular sizes	43 10 0	„	
Oddments	37 10 0	„	
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch.	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per ft. super, as inch	0 1 0	..	0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	28 0 0	..	34 0 0
Do. do. (Java)	25 0 0	..	27 0 0
American Whitewood planks, per ft. cube	0 6 6	..	0 7 6

METALS.

JOISTS, GIRDERS, &c.

	In London or Railway Vans, £ s. d.		delivered per ton. £ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

Wrought-Iron Tubes and Fittings—

Discounts off Association Prices.

	Tubes. Per Cent.	Fittings. Per Cent.
Gas at works	55	57½
Water „	50	55
Steam „	45	52
Galvanised gas at works	30	47½
„ water „	23¾	45
„ steam „	17½	42½

Ex London 2½ per cent. less than above.

L.C.C. Soil Pipe— London Prices.

	Pipes Coated. s. d.	Bends. s. d.	Branches. s. d.
2 in.	2 4	1 8	2 0
2½ in.	2 9	1 10	2 6
3 in.	3 5½	2 0	3 0
3½ in.	3 9¾	2 6	3 6
4 in.	4 1½	2 10	4 0

Rain-Water Pipes, etc.— London Prices.

	Pipe. s. d.	Bends. s. d.	Branches. s. d.
2 in.	1 8½	0 11	1 3
2½ in.	1 10½	1 1	1 6
3 in.	2 2¼	1 4	2 0
3½ in.	2 8¼	1 7	2 4
4 in.	2 10¾	1 11	2 10

METALS (*Continued*).

L.C.C. Drain Pipes— London Prices

4 in., 4s. 1d. .. 5 in., 4s. 10d. .. o in., 5s. 11d.

Per ton, in London.

	£ s. d.		£ s. d.
Iron—			
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0
Steel Bars, Ferro-Concrete quality, £18 basis price.			
Hoop Iron, basis price	20 0 0	..	20 10 0
„ „ Galvanised	33 0 0	..	—

(* And upwards, according to size and gauge.)

	£ s. d.		£ s. d.
Sheet Iron Black—			
Ordinary sizes to 20 g.	20 10 0	..	21 0 0
„ „ 24 g.	21 10 0	..	22 0 0
„ „ 26 g.	22 10 0	..	23 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	33 0 0	..	—
„ „ 22 g. and 24 g.	33 10 0	..	—
Ordinary sizes to 26 g.	36 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g.	23 15 0	..	—
Best Soft Steel Sheets, 26 g.	25 10 0	..	—
Cut Nails, 3 in. to 6 in.	24 0 0	..	25 0 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

		£ s. d.		
Lead—Sheet, English, 4 lb. and up		40 10 0	..	—
Pipe in coils		41 0 0	..	—
Soil pipe		44 0 0	..	—
Compo pipe		44 0 0	..	—

Note—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£ s. d.		
Copper—				
Strong Sheet	per lb.	0 1 6	..	—
Thin „	„	0 1 8	..	—
Copper nails	„	0 1 6	..	—
Copper wire	„	0 1 8	..	—
Brass—				
Strong Sheet	„	0 1 6	..	—
Thin „	„	0 1 8	..	—
Tin—English Ingots	„	0 1 11	..	—
Solder—Plumbers'	„	0 0 11	..	—
Tinmen's	„	0 1 2	..	—
Blowpipe	„	0 1 4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5¼d.	26 oz. fourths	6¼d.
„ fourths	4¾d.	32 oz. thirds	8¾d.
21 oz. thirds	6¼d.	„ fourths	7½d.
„ fourths	5¾d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	„ 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
$\frac{3}{16}$ Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4¼d.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 2
„ „ „ in barrels	„	0 3 3
„ „ „ in drums	„	0 3 6
Boiled „ „ in barrels	„	0 3 5
„ „ „ in drums	„	0 3 9
Turpentine in barrels	„	0 3 8
„ in drums	„	0 3 11
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	58 0 0
Red Lead, Dry	per ton	58 0 0
Best Linseed Oil Putty	per cwt.	0 12 0
Stockholm Tar	per barrel	4 5 0
Filocol	per cwt.	0 9 6

Genuine White Lead Paint—

"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots ...... per ton delivered 70 0 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

CANNOCK.—For the provision, laying, and jointing of about 319 yds. of 9-in. diameter stoneware pipe sewers and other incidental works, for the Urban District Council. Mr. R. Blanchard, Engineer and Surveyor, Council Offices, Cannock :—

C. Jackson, Tipton*	£299

CAVAN.—For the erection of new offices for the Anglo-Celt Company, Ltd. Mr. P. J. Brady, C.E., J.P., architect :—

Prior, Ballinamore, Co. Leitrim*	£795

COWES.—For executing the first section of the works required to be carried out on the Victoria Pier, for the Cowes Urban District Council :—

Beavis*	£167

ILFORD.—For making up rearway of the Town Hall and adjoining buildings, for the Urban District Council. Mr. H. Shaw, M.Inst.C.E., Surveyor :—

Parsons & Parsons, High-road, Ilford*	£309 15 9

KEIGHLEY.—For painting at the Morton Banks War Hospital, for the War Hospital Extension Committee. Messrs. Moore & Crabtree, architects, York-chambers, Keighley :—

E. Thompson, South-street, Keighley*	£115 11 10

LONDON.—Accepted by the Metropolitan Water Board for the supply of stores, etc. :—

Battersea (Stock).—Brown York Hydrant Stones.

Moulsons & Mellors, Ltd.	£35 0 0

Battersea (Stock).—Lily Brushes.

Crowden & Garrod	£27 16 6

Battersea (Stock).—English White Lead.

Grey & Marten, Ltd.	£51 1 3

Battersea (Stock).—Shovels.

T. Yates & Co., Ltd.	£39 15 0

Kent (Wilmington).—Cast-iron Low-pressure Cylinder Casing.

Stanton Ironworks Co.	£54 15 0

Battersea.—Yellow Deal.

Marchant Bros.	£37 10 0

Western.—Automatic Valves for Siemens Meters.

R. Laidlaw & Son (Edinburgh), Ltd.	£34 16 0

Staines.—Cisterns for Treatment of Water at Staines.

London Galvanised Iron Co.	£34 12 0
Croggon & Co., Ltd.	42 0 0

LONDON.—For repairs, decorations, etc., required at the Engineer's house, Brookmill-road, Deptford, S.E., for the Metropolitan Water Board :—

Rice & Sons	£99 0
H. Groves	89 10
Crooks & Co.‡	85 0

‡ Recommended for acceptance.

LONDON.—For the external cleaning and painting of the Board's offices at Savoy-court, W.C., for the Metropolitan Water Board :—

Macey & Sons	£280
J. Stiles & Son	198
Maple & Co.	164
Rice & Sons*	149

NAVAN.—For the erection of the new schools in Navan under the charge of the Christian Brothers De La Salle :—

P. Sheridan, Newbridge, Co. Kildare*	£3,549

STOKE-ON-TRENT.—Accepted for painting and decorating various schools, for the Education Committee. Mr. F. M. Maddox, Architect, Town Hall, Hanley :—

H. W. Brundrett, Tunstall	£110 0 0
S. Barlow, Burslem	127 10 0
S. Barlow, Burslem	30 0 0
Birchall & Sons, Hanley	44 6 0
J. Hudson, Stoke	15 7 0
S. Peake & Sons, Stoke	13 0 0
A. R. Peake, Fenton	49 10 0
S. Brough, Longton	125 0 0
A. R. Peake, Fenton	25 0 0
S. Brough, Longton	115 0 0
S. Peake & Sons, Stoke	33 1 5
A. R. Peake, Fenton	50 0 0
T. Hand, Longton	10 5 0

STOWMARKET.—For the erection of nurses' quarters at the Isolation Hospital, for the Urban District Council :—

W. Murray*	£171

SWANSEA.—For erecting two shop fronts under the arches of the new ship bridge, for the Parks Sub-Committee :—

G. Davies*	£166

WILLENHALL (Staffs).—For the work required in setting back the churchyard wall, etc., in Walsall-street, for the Urban District Council :—

J. Hickin & Sons*	£257 10

PATENTS.

APPLICATIONS PUBLISHED.*

20,873 of 1914.—Philip Hopkins Sm
Safety devices for high-pressure reservoirs
the like.

9,932 of 1915.—Alfred Holland and Er
Richard Royston: Apparatus for mechar
moving or handling material in bulk.

10,076 of 1915.—Henry Pooley & Son, I
and James Dobson: Means for obtaining
weight of railway rails, girders, beams, or sin
sectional lengths.

◆

TO CORRESPONDENTS.

NOTE.—All communications with respect to lite
and artistic matters should be addressed to "
EDITOR" (and not to any person by name); t
relating to advertisements and other exclusively busi
matters should be addressed to THE BUILDER L
and *not* to the Editor.

All communications must be authenticated by
name and address of the sender, whether for publica
or not. No notice can be taken of anonym
communications.

The responsibility of signed articles, letters,
papers read at meetings rests, of course, with the auth

We cannot undertake to return rejected commun
tions; and the Editor cannot be responsible for drawi
photographs, manuscripts, or other documents, or
models or samples sent to or left at this office, un
he has specially asked for them.

All drawings sent to or left at this office for consid
tion should bear the owner's name and address
either the face or back of the drawing. Delay
inconvenience may result from inattention to this.

Any commission to a contributor to write an art
or to execute or lend a drawing for publication. is g
subject to the approval of the article or drawing, w
received, by the Editor, who retains the right to re
it if unsatisfactory. The receipt by the author
proof of an article in type does not necessarily imply
acceptance.

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any important architectural competition will alway
accepted for publication by the Editor, whether
have been formally asked for or not.

◆

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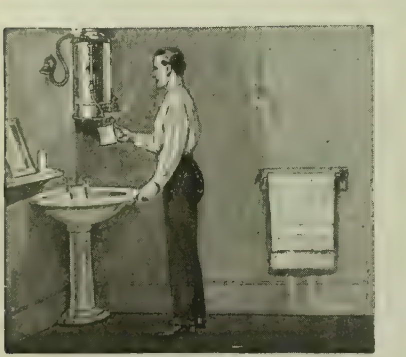

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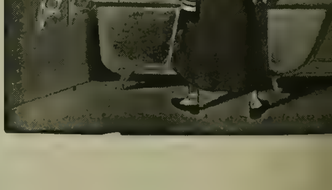
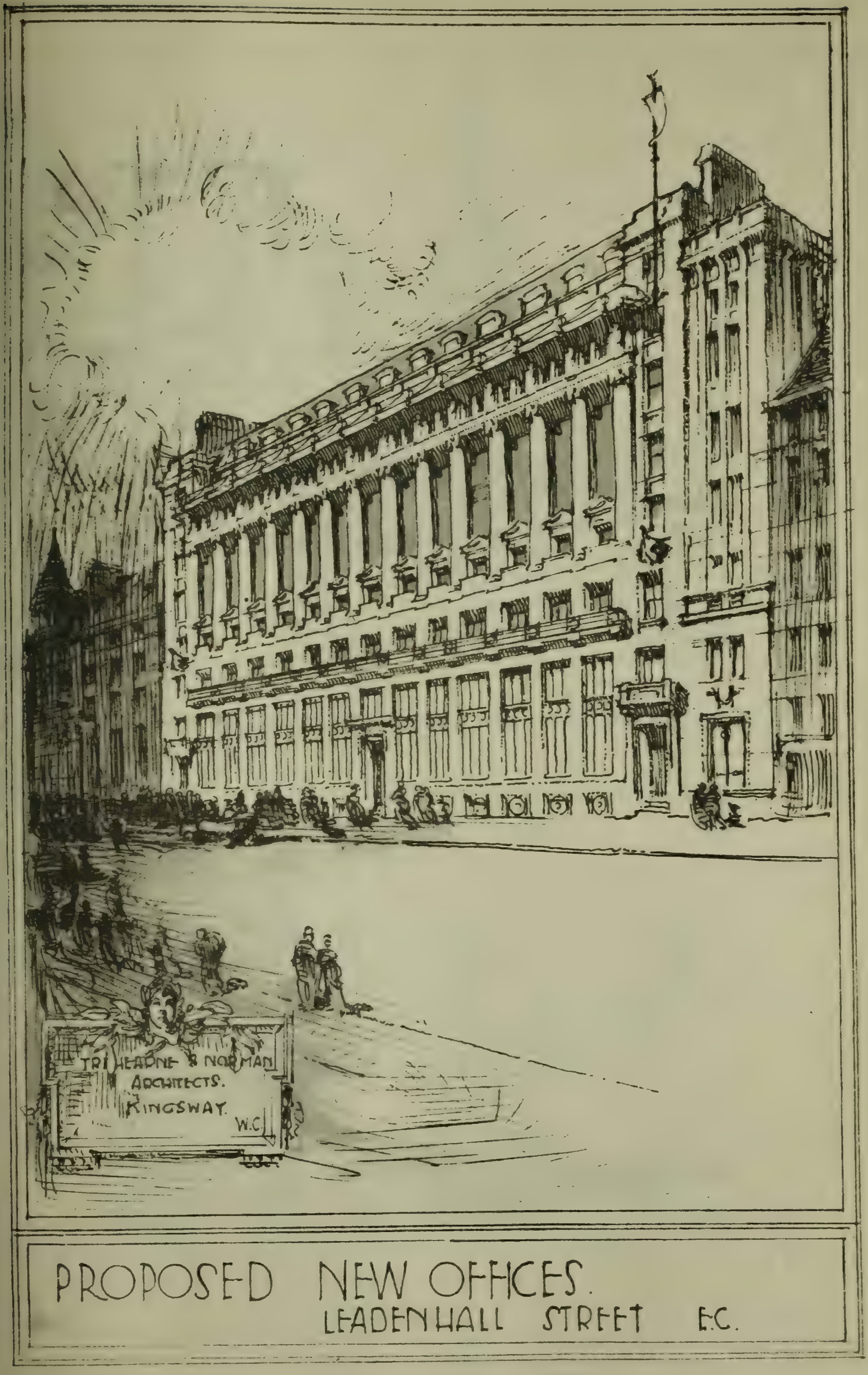
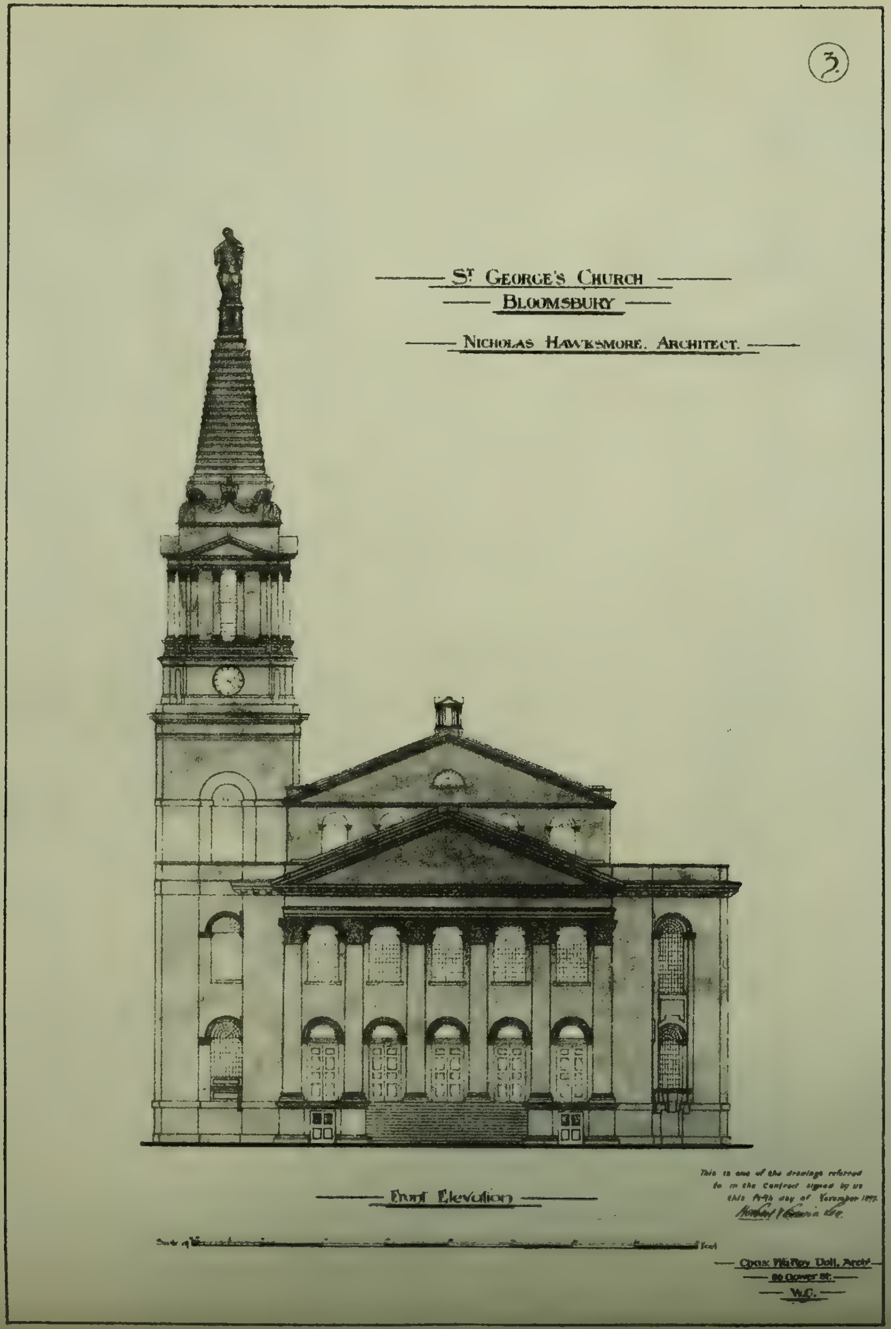




MESSRS. TREHEARNE & NORMAN, ARCHITECTS.


3.
St. George's Church
Bloomsbury
Nicholas Hawksmore, Architect.
Front Elevation
Scale of feet
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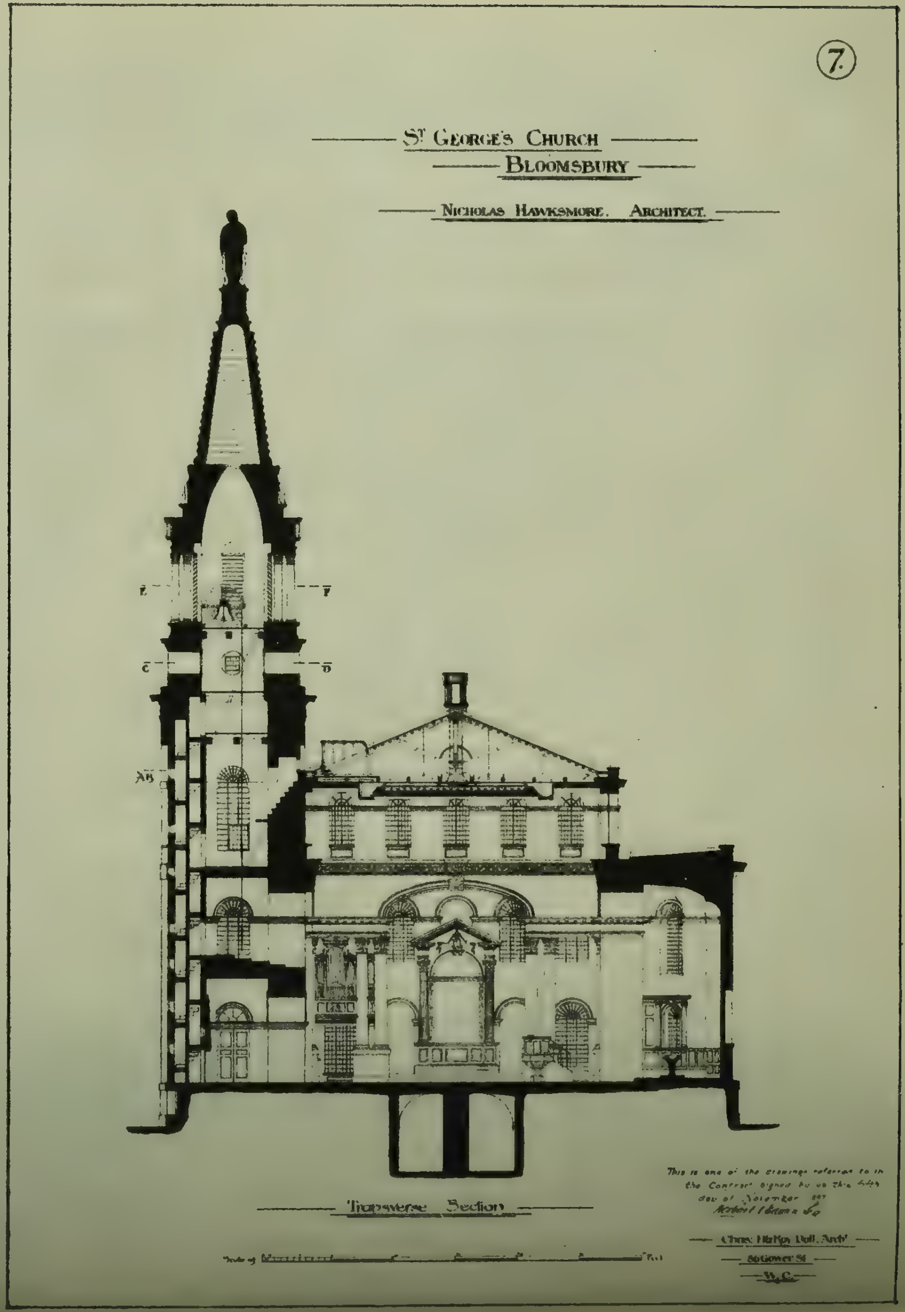
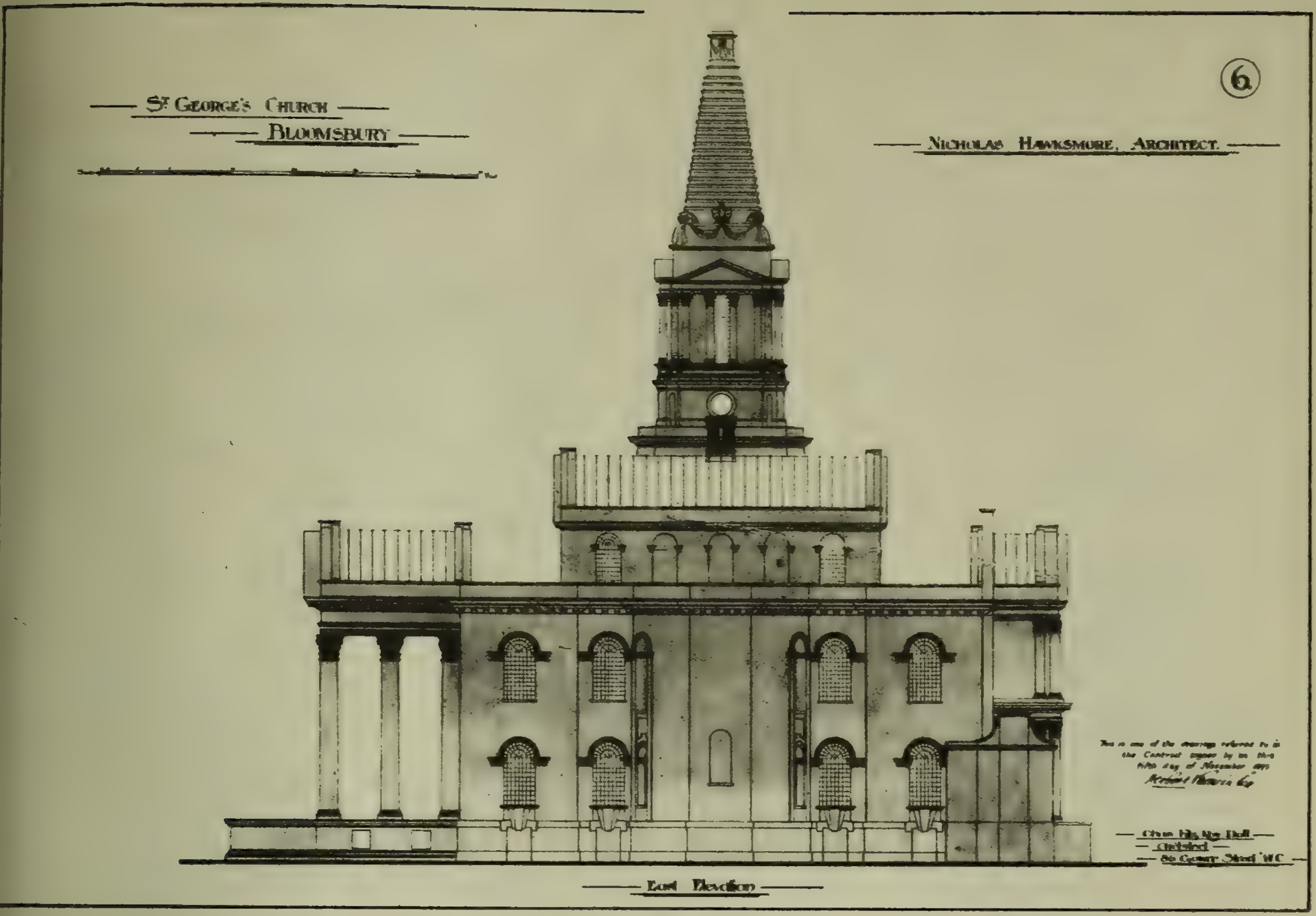
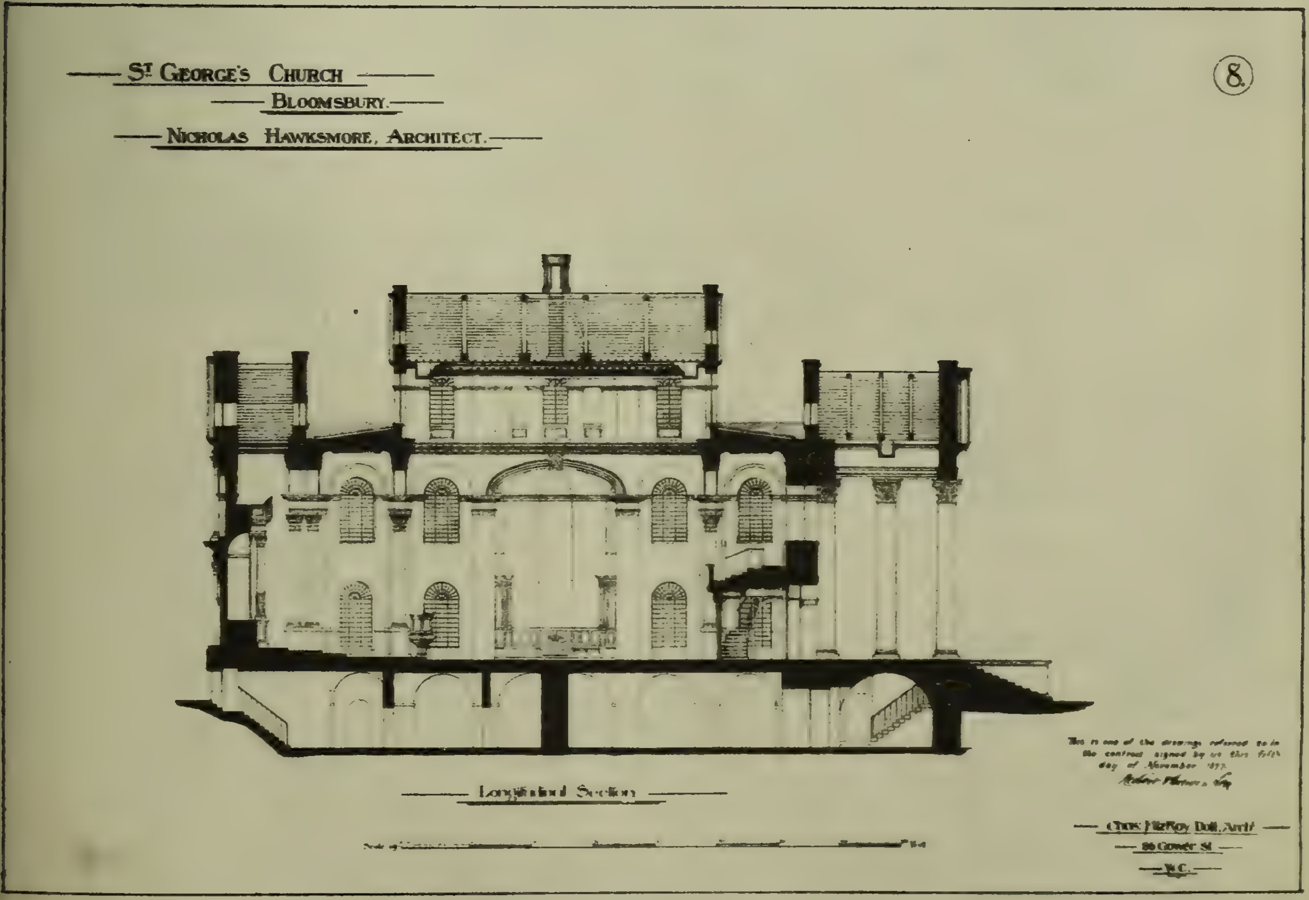
Chas. FitzRoy Doll, Arch^t
86 Gower St.
W.C.

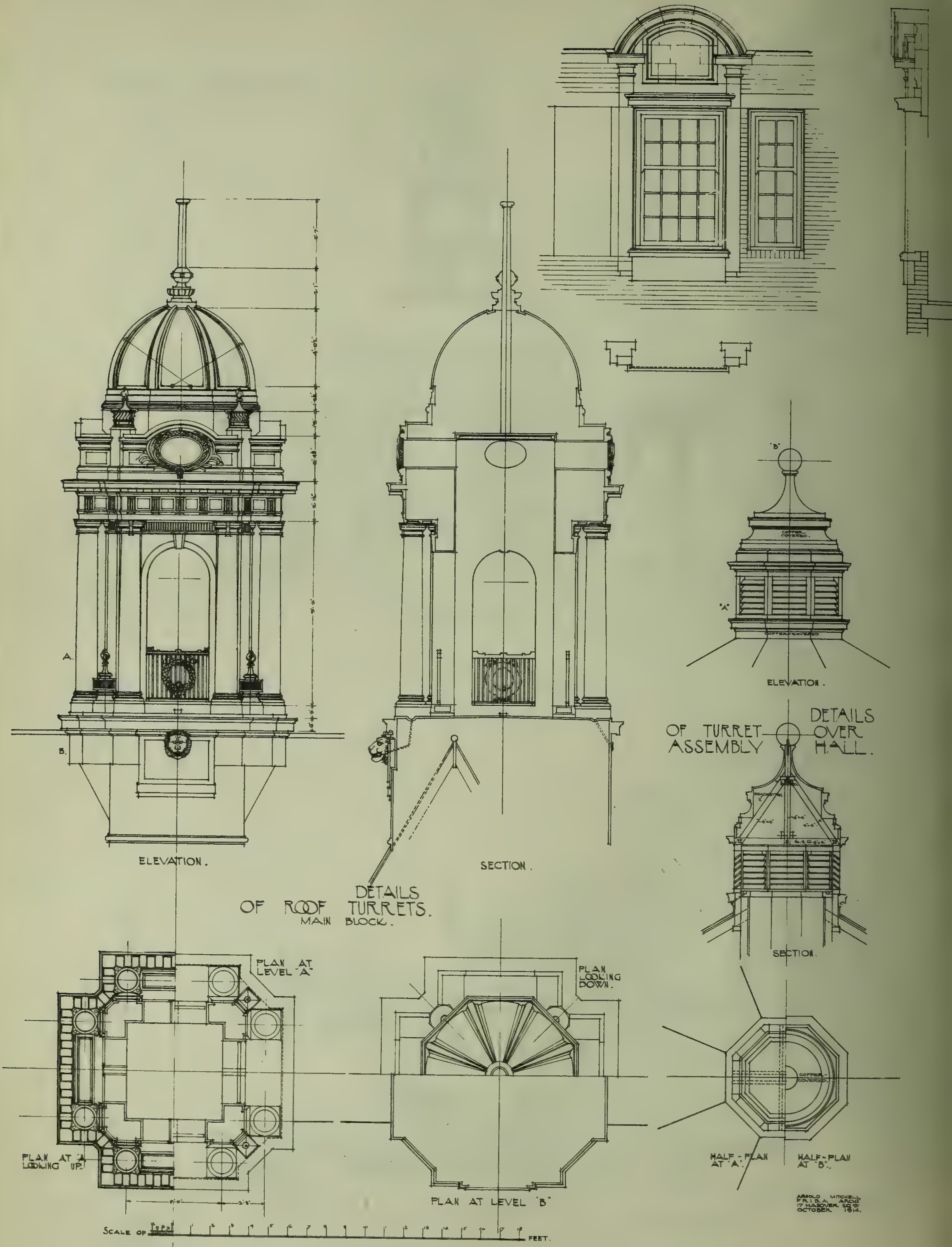

7.
St. George's Church
Bloomsbury
Nicholas Hawksmore, Architect.
E F
C D
A B
Transverse Section
Scale of feet
This is one of the drawings referred to in the Contract signed by us this [illegible] day of November [illegible]
Chas. FitzRoy Doll, Arch^t
86 Gower St.
W.C.

ST. GEORGE'S CHURCH, BLOOMSBURY.

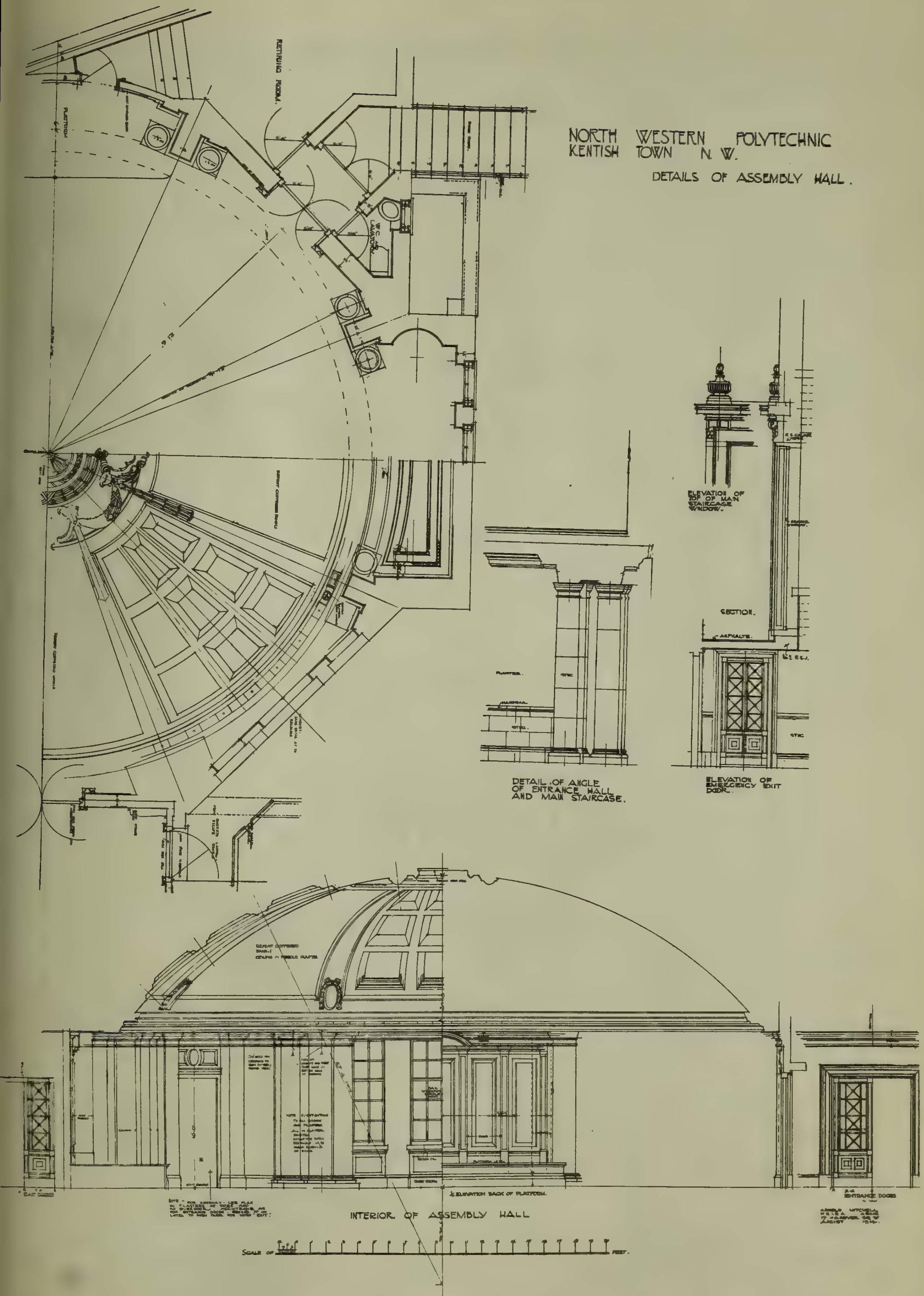

St. George's Church
Bloomsbury
⑥
Nicholas Hawksmore, Architect.
This is one of the drawings referred to in the Contract signed by us this fifth day of November
Chas. FitzRoy Doll
Architect
86 Gower Street W.C.
East Elevation


St. George's Church
Bloomsbury.
Nicholas Hawksmore, Architect.
⑧
This is one of the drawings referred to in the contract signed by us this fifth day of November
Chas. FitzRoy Doll, Archt
86 Gower St
W.C.
Longitudinal Section

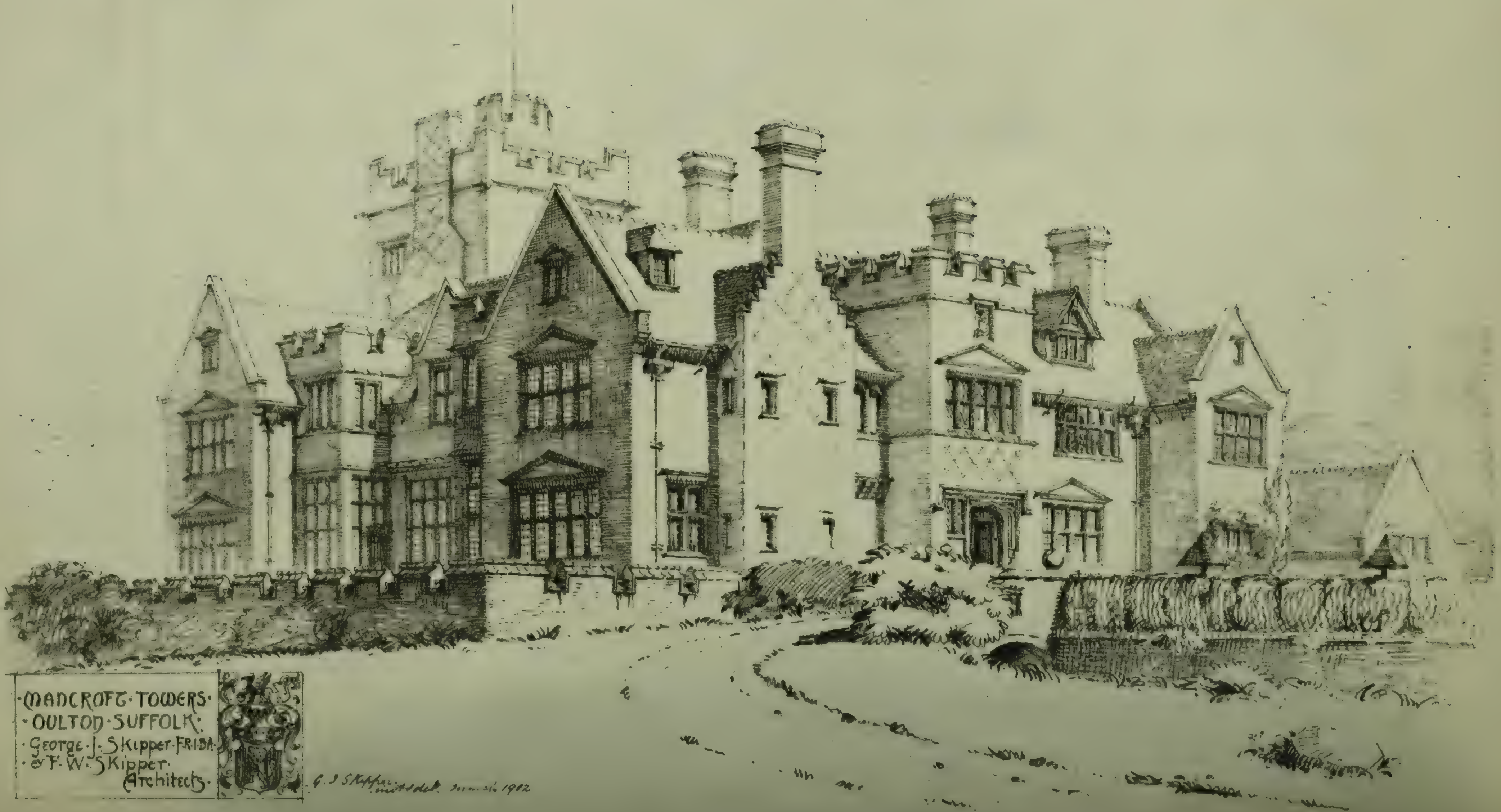
ST. GEORGE'S CHURCH, BLOOMSBURY.



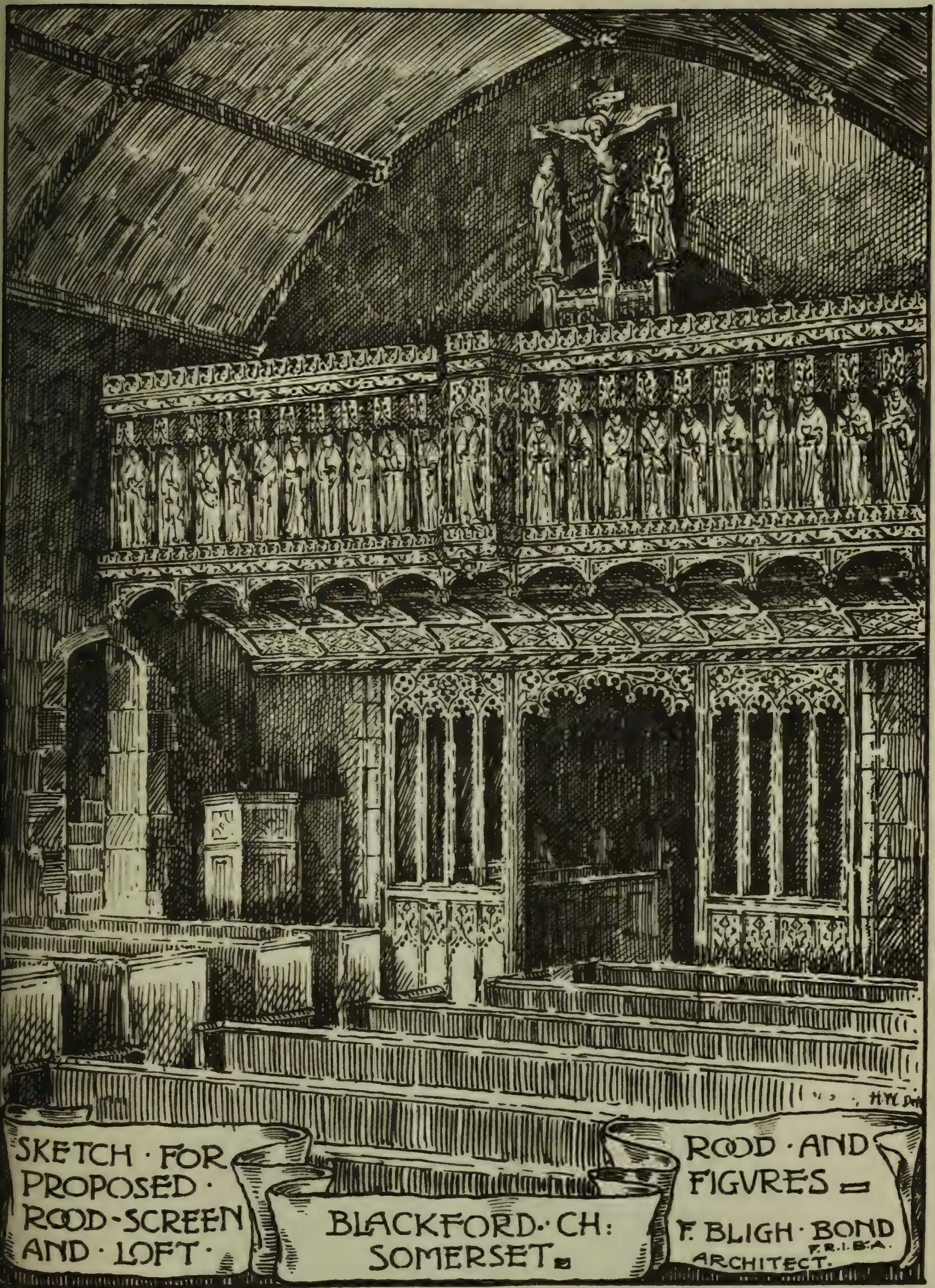
NORTH WESTERN POLYTECHNIC, KENTISH TOWN, N.W.—Mr. Arnold Mitchell, F.R.I.B.A., Architect.


NORTH WESTERN POLYTECHNIC
KENTISH TOWN N.W.
DETAILS OF ASSEMBLY HALL.
RETIRING ROOM.
PLATFORM
W.C. & LAVATORY
ELEVATION OF TOP OF MAIN STAIRCASE WINDOW.
SECTION.
ASPHALTE.
PLASTER.
ETC.
DETAIL OF ANGLE OF ENTRANCE HALL AND MAIN STAIRCASE.
ELEVATION OF EMERGENCY EXIT DOOR.
REPEAT COFFERED PANELS CEILING IN FIBROUS PLASTER
EXIT DOORS
½ ELEVATION BACK OF PLATFORM.
ENTRANCE DOORS
INTERIOR OF ASSEMBLY HALL
SCALE OF FEET.
ARNOLD MITCHELL F.R.I.B.A. ARCHT.
7 HANOVER SQ. W.
AUGUST 1914.

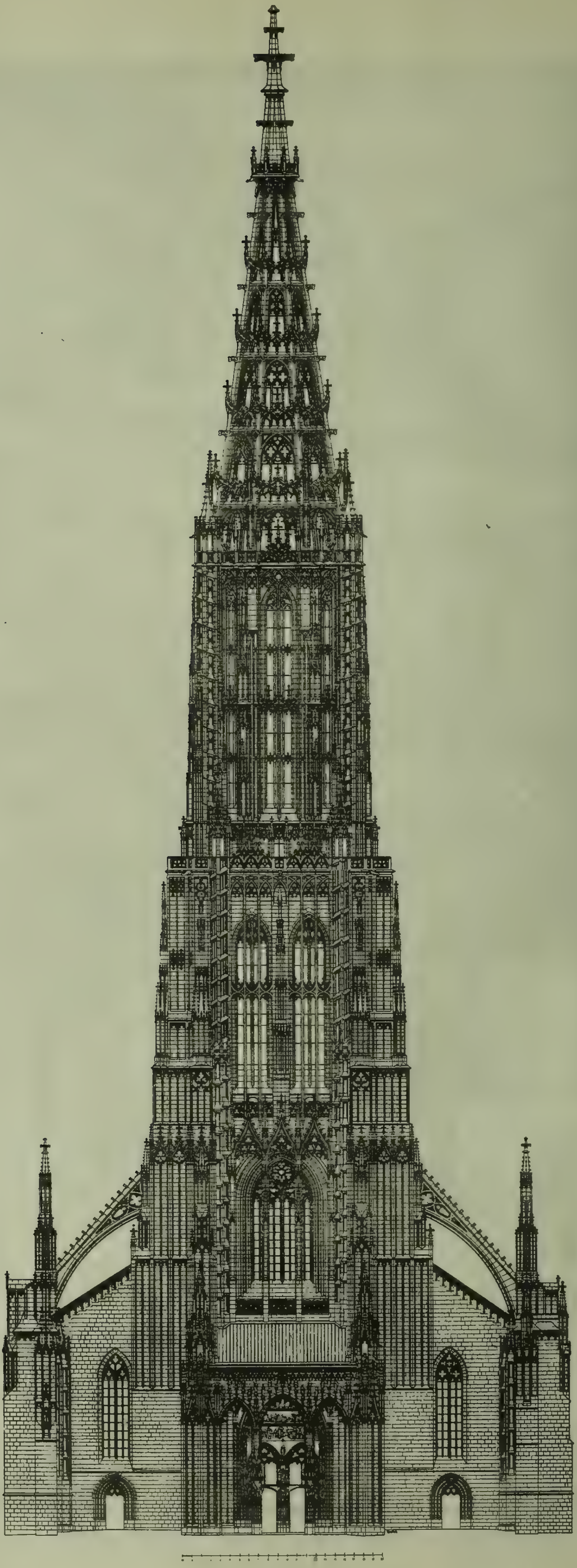
NORTH WESTERN POLYTECHNIC, KENTISH TOWN, N.W.—MR. ARNOLD MITCHELL, F.R.I.B.A., ARCHITECT.


·MANCROFT·TOWERS·
·OULTON·SUFFOLK·
·George·J·Skipper·F.R.I.B.A·
·& F·W·Skipper·
Architects·
G. J. Skipper invt et del. [illegible] 1912

MANCROFT TOWERS, OULTON, SUFFOLK.—MESSRS. G. J. SKIPPER, F.R.I.B.A., & F. W. SKIPPER, ARCHITECTS.



DESIGN FOR SCREEN AND ROOD LOFT, BLACKFORD CHURCH, SOMERSET.—BY MR. F. BLIGH BOND, F.R.I.B.A.



ULM CATHEDRAL.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3829. JUNE 23, 1916.

CHARING CROSS BRIDGE.

WE have expressed our decided views as to the proposals which have been brought into the region of practical politics by the endeavour of the South-Eastern Railway Company to obtain Parliamentary powers for strengthening e present railway bridge over the river. There can be no vo opinions as to the unsightliness of the hideous example of ngineering utilitarianism which now spans the river; but, hile recognised as an eyesore and a disgrace to the greatest ty in the world, it is clear that we have to pay for the mistakes past generations, and we were prepared to wait until time ndered the demolition of the bridge inevitable. But when e South-Eastern Railway Company, knowing that their ridge was of an inadequate strength to bear the weight of creased traffic, brought forward a scheme involving the xpenditure of a great amount of capital in strengthening ne side of the bridge alone, the question became one of urgent nd immediate importance.

We have agreed on a party truce in politics to meet urgent ational and patriotic wants; we have made sacrifices of habits nd convictions such as no previous generation has made, ecause we all know that history is being re-made and the xistence of all we have cherished hangs in the balance. There at present no party within the confines of these islands, and r the first time in the memory of any of us every class nd section of the people have one common object to which all se is subordinated.

It is extraordinary that in such a crisis a private company ould seek to obtain powers for a measure which is highly ontroversial, especially as it is recognised that the work if arried out cannot be put in hand until the termination of the resent colossal struggle. Considering the serious preoccupaon of Parliament and the local authorities concerned, the tion of the railway company would seem to be that of a ody which seeks to obtain an advantage which it is doubtful gaining when national politics no longer entirely occupy the ttention of the public.

Some critics may wonder that we have not referred to the uestion at greater length in previous issues, but our position a clear and logical one. When, through the energetic and apable action of the Royal Institute, the London Society, and ther bodies, it was agreed that the opponents of the ill should be heard by the House of Lords Committee, e considered the question for the time *sub judice*, and hought that the comments of the Press were more likely prejudice than to help matters. A Committee of he House of Lords is a judicial body, and in that apacity has to confine its attention to the evidence placed efore it and to deal with no extraneous matter. The fact hat a question has become one of popular Press commentary efore it comes up for the consideration of a judicial committee ould appear to us to be likely to do harm rather than good to he adherents of any cause. But, now that the preamble of the ill is approved, the reticence which we have employed is no onger necessary, and we can freely state our views on the hole question. We do not think that the fact that the Bill is o be brought before the House of Commons is a sign that its romoters are likely to obtain the approval of Parliament to heir proposals, but take it to be an admission on the art of the Committee that the questions involved are so sharput and definite that the nation's representatives can be xpected to form an accurate judgment as to the merits of he proposal; while there is no doubt in the minds of any a suspicion that any alternative scheme is likely to be somewhat unpractical because it is so evidently æsthetically desirable! It is difficult to rid ourselves at once of one of the fetishes of the nineteenth century, which was that necessity involved the destruction of beauty—a fetish which is responsible for the hideous deformation of town and country and the absolute want of all proper foresight. We are at the beginning of a new era, and find that much of the work we must do involves the undoing of past mistakes and the adoption of entirely new methods if we are not to weight down successive generations in our turn.

Cheapness was the recommendation of the original bridge, and like most cheap things it is likely to prove expensive to its owners. Now it is proposed to strengthen it at a cost of £170,000, and it would appear in doing so to make it, if possible, an even greater eyesore than it is at present. The Committee, of which Lord Bristol was the chairman, was instructed to take into consideration *the requirements of traffic over the river at this point*, and to hear evidence from the various bodies interested. Now, Westminster and Waterloo Bridges are 960 yds. apart, a greater distance, as Professor Pite points out, than that separating any other public bridges in Central London, and if the railway bridge is to remain there is no practicable position for road access from bank to bank between those points—a factor which has an important bearing on the subject, seeing the enormous growth of road traffic which has taken place within recent years. Again, all those who are interested in the welfare of London recognise that the district which is most urgently in need of improvement is the southern side of the river, and a necessary part of such improvement is the provision of means of açcess; moreover, there is hardly a point in the whole course of the river through Central London where such communication would be more useful, for Trafalgar-square is to the west of London what the Bank is to the City—a great meeting-place of important thoroughfares. The scheme by Mr. Barclay Niven and Mr. Raffles Davison, shown by sketches in this year's Academy, illustrates this, and, though the plan is only suggestive, we can realise the enormous importance for traffic purposes of a road bridge at this point communicating directly with Trafalgar-square and leading up to a new station on the southern side of the river. The company's station at Charing Cross is already cramped, and the space available there only amounts to four acres, an area which is now too small for the company's requirements, and will become increasingly so with the passage of time, while there is no available space for enlargements. More than this, the approaches to the station at right angles to one of the busiest streets in London, and within a stone's-throw of the junction of Trafalgar-square with the Strand, are as inconvenient and dangerous as they could be, and must become more so in the future. South of the river it would be possible for the railway company to obtain a cheap and adequate site with perfect approaches, and the size of the site would enable the company to consult both their own convenience and that of the public. The rateable value of property on the southern side of the river would be much enhanced, while the sale of the present site would produce an immense sum of money, which would go far towards compensating the company for the cost of a new station, and it would be the gainer by being saved the heavy charges involved in the upkeep and repair of a great bridge. This is the practical aspect of the problem, but the æsthetic gain to London would, if anything, be immeasurably greater. As we have pointed out, no more fitting memorial to commemorate those who have fallen in the present war could be imagined than a fine monumental bridge over the Thames at a point where it is badly needed now, while in the future it will inevitably have to be provided at far larger cost if the present opportunity is neglected.

No one can fail to be struck with the unanimity of those who, like Mr. John Burns, have devoted their lives to municipal and public services, Sir William Lever, a typical representative of commercial interests, and architects of established reputation like Sir Aston Webb, Professor Beresford Pite, and Mr. Paul Waterhouse; while to the growing volume of protest are added letters from Mr. Reginald Blomfield, Mr. Ernest Newton, Professor Lethaby, and Mr. William Woodward in the columns of this week's *Observer*. Though the supporters of the Bill would, for obvious reasons, prefer less discussion and more privacy, the General Manager of the South-Eastern Company has been compelled by *force majeure* to write a letter which we can only describe as a half-hearted admission of the weakness of the case of the supporters of the Bill. From it we gather that the company are convinced of the advisability of a great reform, and are proposing to strengthen the existing bridge instead of widening it in accordance with Parliamentary consent previously obtained, in order to give time for plans to be prepared for the removal of the terminus to the southern side of the river, and for the County Council and other authorities to come to some agreement as to the construction of a new road bridge! Frankly we are not inclined to take this optimistic view of the company's motives, but we believe with Mr. Ernest Newton that if the present opportunity is not utilised we shall be saddled with a monstrous anachronism and eyesore for another generation.

If the railway company did not use the powers they had obtained for widening the bridge before the war, presumably they did not do so because the need did not seem to them to be an urgent one; but now that a great London improvement is on the *tapis* they would take steps at a most inopportune time in order to fetter improvement for many years.

Sir Aston Webb stated in his evidence that no one had any authority over London, and it is due to this remarkable fact that public convenience is so frequently sacrificed at the altar of private interests, and we may add that in making the sacrifice private interests are not always attained.

In dealing with such a question as this it will usually be found that if we take a sufficiently broad and enlightened view private interests and public amenities can be met at one and the same time, and this would seem to be the case here. Present arrangements involve the company in the traffic difficulties arising out of inadequate terminal facilities—the upkeep of an expensive and unnecessary bridge, while a better and cheaper site of ample size is available. On the other hand, the development of the southern side of the river is checked and its rateable value prevented from expanding because the railway bridge and station are badly placed. These facts cannot be controverted, and it is on this very practical basis that unanimity of opinion is inevitable to all who consider the question. The statements made by Sir Francis Dent as to the time which the preparation of a larger scheme would involve are scarcely justified. The London County Council have throughout their history shown energy and determination in every case involving the greater interests of London, and even now we are sure would give their consideration to the best method of dealing with the problem; while the services of engineers of standing and architects are available. We are living in times when our constructional works are occupied for the most part with the production of munitions of war, and therefore, assuming it were desired to strengthen the existing bridge, the work could not be proceeded with. But this does not apply to the preliminary discussion of a great improvement which could be taken up without the withdrawal of a single man from national services, while time spent in the consideration of the problem would be of national service in preparing for the problems of peace which will possibly be with us at no distant date.

Those who have given up their occupations and positions in order to serve their country in a time of crisis may reasonably expect that those who are unfit through age or circumstances to help directly should be working for the common good—the future prosperity of the nation—while they are away.

Both the Royal Institute of British Architects and the London Society have taken a leading part in such work, and architects, while contributing a great proportion of thei numbers to the combatant services, have shown foresight an enthusiasm by instituting schemes such as the London Civi Survey and the London Development Plan, which serve th double purpose of affording assistance to those who ar especially badly hit in consequence of the incidence of wa and of preparing useful and necessary data which will b required in connection with the schemes of improvement an development which time has rendered necessary.

Everywhere round us there are signs of life which presen difficulties and trials have stimulated. We may mention th activities of the various town-planning societies, the deter mination to put the housing problem on a sound and workabl footing, and the movement to improve the design of ou commercial products.

But the greatest of all services which we could render t London would be the institution of an improvement which i urgently needed for practical purposes, while at the same tim it would form a better memorial for those who have fallen i the country's service in the great war than anything else whic could be mentioned.

The battle is now joined, and, judging from what has bee already done and the interest and enthusiasm evoked, th prospects of a successful issue are encouraging, thanks to th public-spirited efforts of those who have initiated, at the sacrific of much time, a proposal of the first practical and æstheti importance.*

SIR ROBERT ROWAND ANDERSON, KT. LL.D., R.S.A., ROYAL GOLD MEDALLIST

AN APPRECIATION.

THE bestowal of the Gold Medal of the Royal Institute of British Architects on Sir Robert Rowand Anderson, LL.D., may be looked upon not only as a recognition, long overdue, of his great attainments as an architect, but also as a tribute to Scottish architecture in general.

The doyen of the profession in the northern portion of the United Kingdom, the eminent architect who has thus tardily but very deservedly been honoured has consistently maintained a very high standard of excellence in all the numerous and important works of both a public and private character which he has carried through in the course of a long and successful career, extending through half a century or more. He has also by his example, as well as by his teaching, inspired others to strive to reach the same high level of attainment.

In public affairs his advice has constantly been sought in matters more generally affecting the domain of architecture and its allied arts, and his influence has always been directed towards the support of such projects, for instance, as protected or enhanced the amenities of the city in which he has so long and honourably laboured. It is not too much to say that the upholding there of the tradition of good building, which has always been a living force, has had fresh vigour put into it by his steady endeavour and example.

In a city which enjoys the appellation of "The Modern Athens" it is meet that good architecture should persist, and the history of the Edinburgh of the last hundred years or more shows how much has been done to keep up the excellence of the tradition.

The ancient Guild of the Masons—real masons these were—had up to the latter part of the eighteenth century practically controlled building in the city, and members of the body not only erected the actual structures but very often planned them as well. William Adam, father of the famous brothers Robert and James, was a master mason, and as such both built and designed a large number of country houses and other buildings, many of which are still extant (*vide* "*Vitruvius Scoticus*"). Thomas Mylne, another master mason, was the father of that Robert Mylne, a Fellow of the Royal Society, who practised so long and successfully in London, both as architect and engineer, and ıo was Surveyor to St. Paul's Cathedral, in the crypt of which lies buried. This Robert was eleventh in direct succession this family of master masons, and could trace his descent ɔm John Mylne, master mason to King James III. of Scotland the fifteenth century.

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* We give among our inset illustrations a drawing by Mr. Raffles Davison, a description of which is given on page 455, and which has been specially prepared for us.—Ed.

But although some, like Mylne and the Brothers Adam, came ıth and found success, many others, equally able, remained beautify their native country and city with fine buildings—ıe both in composition and design and in the manner of their ecution. For while the London of the Regency was being built in brick and stucco a great town-planning scheme was king shape in Edinburgh in a more lasting and beautiful edium, the well-known "Craigleith" stone.

Edinburgh alone can show many fine buildings erected during e nineteenth century, planned by able scholarly men, the uals of Cockerell, Smirke, Barry, and others of their times, ıt whose names are hardly known in the South. The city ves much to the genius of men like Playfair, Hamilton, Bryce, hind, and many other immediate predecessors of Sir Rowand nderson, and he has worthily followed in their footsteps.

Very few architects now living have shown greater activity practice, and fewer can point to such an extensive range executed works of such extraordinary versatility. It is ıpossible here to give anything like a complete list of these, ıd one can only indicate a few of the most important of them.

A Continental tour undertaken in early days produced a ost interesting volume on "Examples of the Municipal, ɔmmercial, and Street Architecture of France and Italy." his book is dedicated to Sir George Gilbert Scott, R.A., who ıd already recognised in the author a promise that was terwards fulfilled, and who had associated him with himself the erection of a large Episcopal church at Leith, near dinburgh.

The reform of Scottish elementary education, initiated by e Act of 1870, necessitated the erection of large numbers of ew schools, especially in the towns, and, as the result of a ɔmpetition under the auspices of the newly-constituted dinburgh School Board, Robert Anderson was awarded st place, and was entrusted with the erection of three large ew schools in the city. The designs of these show the fluence of the tour already mentioned, and the buildings are nongst the most interesting of his many works. He later ected several other schools in various parts of the country.

A more important competition, a few years later, got for im the commission for the new buildings of the Medical School the University of Edinburgh, a fine and most interesting oup, completed in later years by the erection of a large hall ɔr University functions named the "McEwan Hall," after the enerous donor.

Amongst other works done for the University was the ɔmpletion of the old college buildings of Robert Adam and thers by the erection of a large dome over the entrance front. ı his design for this he departed from the type indicated by dam in his original drawing for the buildings which still exists ı the Soane Museum, and he erected a larger and more mbitious structure, and has been much criticised for so doing.

After the burning of the old Mount Stuart House, somewhere ı the seventies, the late Marquis of Bute entrusted Anderson t is said on the advice of Burges, who had himself declined the ork) with the preparation of plans for a very large new ıansion, which has only comparatively recently been completed y the addition of a magnificent private chapel, the interior of hich is lined throughout with white marble.

About the same time the Caledonian Railway Company ere erecting the large new Central Station in Glasgow, and nderson was commissioned to prepare the design for the large lock of offices which were to enclose it on two sides. When ıese had been nearly completed the company decided to ɔnvert the building into an hotel, and this difficult task was arried through by him with considerable success, the result eing the Central Station Hotel, so well known to travellers in ıe West of Scotland.

Amongst other works of a public or semi-public nature ıention should be made of three large buildings, all in Edinburgh —the Scottish National Portrait Gallery, a structure of Gothic ype in red stone; the Scottish Conservative Club, built in the talian Renaissance manner; and the Hall of the Ancient ompany of Archers, the King's Bodyguard in Scotland.

When the competition for the Imperial Institute was arranged for in 1884 Anderson, as the representative Scottish architect, was asked to send in a design, and again in 1901 for the Queen Victoria Memorial.

In church work he has always been active, and in many of the smaller towns of Scotland are to be found interesting churches designed by him for the Episcopalian body. For the Church of Scotland he erected a large parish church at Govan, near Glasgow, and many others elsewhere for the various branches of the Scottish Presbyterian Church. Another notable church of his is the important one belonging to the Catholic Apostolic body in Edinburgh, which contains some very delightful mural decoration by Mrs. Traquair.

The roofing in of the nave of Dunblane Cathedral and the making of it again available for Christian worship after several centuries of ruin was carried out under his direction. He also advised on and superintended the repair of many other notable historical ecclesiastical buildings, such as Jedburgh Abbey, St. Germain's Cathedral in the Isle of Man; King's College Chapel, Aberdeen; the Abbey churches of Dunfermline, Paisley, Culross; St. Virginian Church, Arbroath; the first repairs at Iona, and many others.

He likewise erected many country houses, both large and small, such as Lord Strathcona's highland residence in Glencoe; and his advice was sought by the late King in connection with extensive additions to and improvements of Balmoral Castle.

Many memorials to eminent men were designed by him, amongst others the monument to the great Montrose in St. Giles's Cathedral, Edinburgh.

In town planning his influence has been considerable, two of the largest estates in the neighbourhood of Edinburgh, for instance—Fettes and Braid—having been developed under his guidance during the last thirty or forty years.

He early recognised the importance of having systematic records made of all the principal historical buildings of Scotland, ecclesiastical, municipal, and domestic, and he initiated the preparation and collection of a series of measured drawings and photographs of such buildings. Long years ago he used to encourage his pupils and assistants to devote portions of their holiday-time to such work, both for their own improvement and in order to form the nucleus of what has now become a large and important national collection.

In education his influence has always been exerted to good purpose. In his own office it was his custom to initiate individual responsibility amongst his pupils, who at an early age were given charge of small works, thus drawing out any latent talent and leading them on to think for themselves and to develop instincts which stood them in good stead in later life. Many architects whose names are now well known, both in Scotland and out of it, have to thank him for giving them a fair start in thought and activity of work.

He was largely instrumental in starting the School of Applied Art in Edinburgh under the Board of Manufactures, in which teaching was given by trained architects, and of which he acted for many years as Honorary Director. This School has more recently been embodied in a much larger scheme of technical instruction, on the governing body of which he still occupies an important position.

He has even devoted some of his hard-earned leisure to work of public usefulness. At Tangier, in Morocco, where he had built himself a haven of rest, he initiated, amongst other things, a revival of the silk industry, and himself started plantations for the breeding of silkworms.

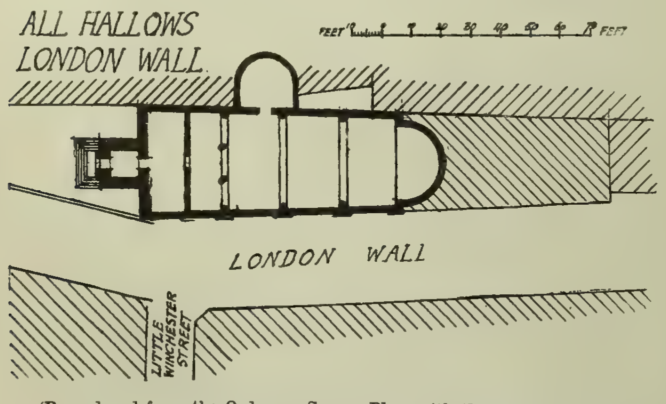
Sir Rowand early became an Associate of the Royal Scottish Academy, of which he is now an Honorary Academician. The University of Edinburgh many years ago gave him the degree of Doctor of Laws in consideration of his services to the University. He was further honoured about fourteen years ago by having conferred on him the dignity of Knight Bachelor as a recognition of his great attainments in architecture. It is well, therefore, that the central representative body in architecture in this country should have given such a very distinguished exponent of the art the highest recognition in their power, thus honouring not only him but themselves in so doing. May he be spared many years to enjoy his numerous honours and the fruits of that leisure which does not always come to everyone after a strenuous and prosperous career!

R. W. S. W.

NOTES.

War Statistics. In these sad times it is well not to dwell too much on our own hardships, but to compare our condition with that of others. Thus although statistics have been robbed of some of their value so far as employment is concerned by the diversion of labour in civil callings to military activity, yet they serve in some respects to enable us to compare our lot with that of other belligerents. In the *Labour Gazette* for June we read that the men still remaining in the building trade were well employed in May, but the German Department of Labour Statistics has to report in April, "No real improvement was observed in the building trades, although in South Germany there was a partial revival." Our trade unions report but 0·5 per cent. as unemployed in May; whilst the German trade unions, with about the same membership, report 2·3 per cent. as unemployed in April. As regards wages, no statistics are available from Germany, but we know here that wages are high; indeed in the five months of this year the net result of the changes in rates of wages was an increase of £140,000 a week, affecting some million and a half workpeople. The building trade has participated in £10,274 of this sum. Any mention of increased wages is, however, always "counter-attacked" by a reference to the increased cost of living. Even so we can turn to a comparison with other belligerent countries for consolation. Taking the country as a whole, and regarding articles of necessity in working-class households, the retail prices of food here in May were 59 per cent. above pre-war level; but in Berlin in April they were 120 per cent. above the prices prevailing in July, 1914. Prices in Berlin are, moreover, not as is the case here, actual prices, as many of the articles listed are unobtainable at any price, whilst in other cases the articles of food are blended with substitutes—in fact, in Germany those asking for bread may well complain that they have received a stone. We commend the above figures to the consideration of the grumblers, if there are any avowed persons of that ilk, and it would certainly surprise our forefathers to learn that in the course of a great European War it was not this country which was starving, but the enemy countries, for in Austria prices are even a trifle higher than in Germany.

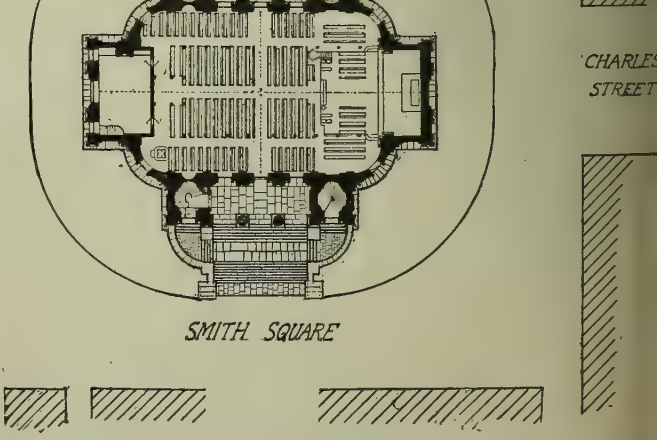
Debt and Churches. It is stated on the authority of a Fellow of the Royal Statistical Society that in one denomination, that of the Primitive Methodists, the huge sum of £47,000 annually is needed to pay the interest on money borrowed for the building of chapels. We have sometimes wondered whether it would not be better to build fewer churches and chapels rather than incur the heavy burden of debt which renders the life of a clergyman or minister one of trial. The man who of all others needs quietness for reflection and thought—live he ever so frugally—is often put in the position of a spendthrift who lives beyond his means, and this without having committed any of the follies or extravagances which should bring their just punishment. In one of Harold Frederick's novels, "Illumination," we read how in America the services of a "Debt Raiser" are utilised—that is, a man who combines with glibness of tongue and an ability to arouse the emotions a shrewd business sense, and who travels from congregation to congregation to hold Revivalist meetings. We never see a new church or chapel without reflecting on the immense effort which has been expended in raising funds, and we greatly wish that clergyman or minister could say, "Money is required for a new place of worship; it is your business to provide it if you want to carry on a useful work; it is not my province to deal with such matters." We wonder whether the enlightenment of future generations will draw a line of separation between matters which are so radically distinct as the raising of funds and the giving of spiritual help and advice?



(Reproduced from the Ordnance Survey Plan, with the sanction of the Controller of H.M. Stationery Office.)

Housing Shortage in Newcastle. A local paper complains of the apathy shown l the Newcastle authorities in the matter of housin It is calculated that 4,000 married men, the majori of them with families, are occupying hired roo and that there is a housing shortage of this amou in the city. Our contemporary says the Corporation have be apathetic in carrying out the Walker Housing Scheme. The Committ having the matter in hand could make no satisfactory arrangeme with contractors, and so the Local Government Board ha withdrawn their sanction to the £60,000 loan required in connecti with the building of 300 dwellings. The municipal authorities ha paid many thousands of pounds to the dependents of municipal servan who have gone on active service, and it is urged that if they had tak an equally broad-minded view with regard to the contracts for t Walker Housing Scheme much would have been done to allevia local hardship. It is suggested that the high rate of infant mortali is largely due to overcrowding, and it is asked how we can expe to produce a rising generation of sufficient stamina to carry on t race in such conditions. It seems to us that there is urgent necessi for the relaxation of the enactments which have checked priva speculation in housing, and there is much to be said not only for th but for the policy of granting municipal bonuses to those who w fill in the gap—always providing they do so in accordance with t maintenance of a satisfactory standard of design and constructio In no other way that we can see can the necessary work be carri out without great and even prohibitive cost to the State.

Housing in Dublin. The Honorary Secretary of the Sub-Committee the Dublin Watch Committee writes to a loc paper to say that, though the rebuilding of Sackvill street has been the subject of constant discussio one important aspect of the case has been entirely overlooked. is felt by the writer that any attempt to rebuild Sackville-stre on a grand scale will be money wasted so long as the slum proble is untouched. There were, it is added, in 1814, 37,552 persons wh were occupying dwellings almost unfit for habitation and 22,70 persons inhabiting houses unfit for occupation and incapable of bei improved. When we consider that those who have been rejecte as unfit for active service in the war are in many cases unfit becau they have not lived in healthy conditions, the fact is brought hom to us that it is necessary for the safety of the State to do away wit insanitary conditions at any cost, and future legislation mu more and more recognise the necessity. Intemperance, crime, an disease are all direct products of insanitary conditions, and it is crying shame that in this age modern science and civilised legislatio should not have banished the evil for ever. Hospitals and priso are very largely a recognition of the fact that civilisation has faile and socialism can be most effectively banished by wise and tempera social reform. In the physical and moral well-being of the peop will be found the best assurance of the stability of the State—an en which all should work for.



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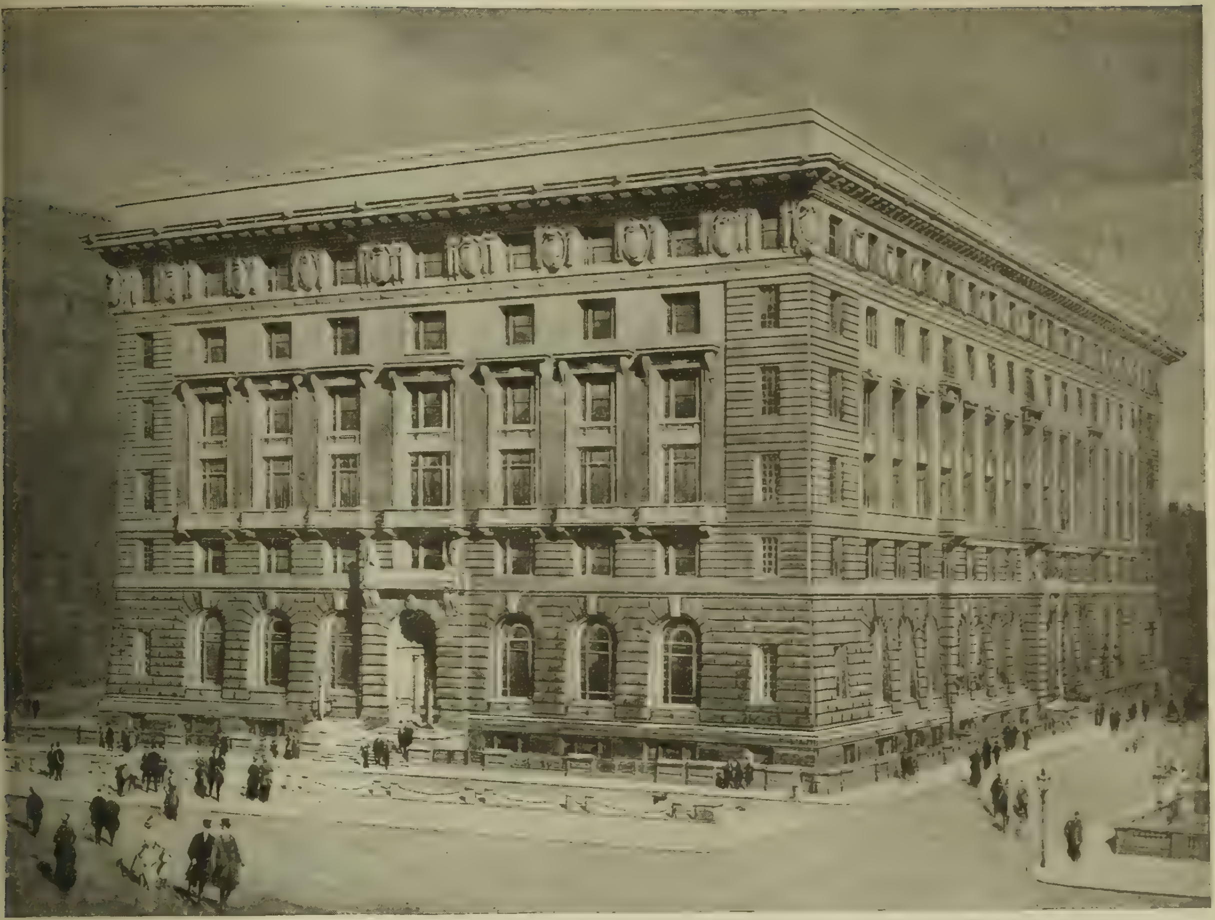


The Cunard Offices, Pierhead, Liverpool.
Messrs. Willink & Thicknesse, Architects; Messrs. Mewès & Davis, Joint Architects.

HE LONDON CHURCHES OF WREN AND LATER ARCHITECTS OF THE RENAISSANCE.

No. XLI.—All Hallows, London-Wall.

The Church of All Hallows was designed in 65-7 by George Dance, R.A., the architect Newgate Prison. His work shows the fluence of his long stay in Italy, where he ined the Royal Medal of the Academy of ne Arts in Parma in 1763, and was greatly fluenced by the work of Piranesi. All allows is externally a simple brick building, th a stone tower; but its internal design is ceptionally good. A range of engaged Ionic lumns on either side supports a curved ceiling to which large semicircular windows break. ne ceiling is well designed, and a pleasing nse of proportion and refinement of detail aracterises what is one of the most beautiful enaissance interiors in London.

No. XLII.—St. John the Evangelist, Westminster.

The Church of St. John the Evangelist as designed by Thomas Archer, who was .P. for Warwick and was much employed uring the first half of the eighteenth century. rcher was a pupil of Vanbrugh, who appointed m architect for the church, which was one the fifty churches ordered to be built during ne reign of Anne. St. John the Evangelist as built between the years 1721-28, and is id to have cost £40,000. Columns supporting ne ceiling were a part of the original scheme, ut after a fire in 1741 they were removed. alleries were added in 1758 and increased in 821 by William Inwood.

The church is an interesting one, and is ery characteristic of its period. It occupies n exceptional site in the centre of Smith-quare. Its design is vigorous, though coarse, randiose, and expressive of the manner of anbrugh.

THE NEW CUNARD BUILDING.

The Cunard Building is conveniently situated on a site adjacent to the Liverpool Landing Stage and commanding a magnificent view of the Mersey Estuary.

Before commencing building operations the foundations had to be prepared, and it was decided to embed the massive pillars which support the structure in the solid red sandstone which was the stratum underlying the old dock. Arrangements, too, were made by a system of pumping for dealing with any water which might find its way into the old-time excavation, and with these preparations successfully negotiated the work proceeded apace. Operations were commenced in December, 1912, and in June, 1916, the Cunard Company were enabled to move into their new quarters.

The style of building to be erected was a matter of much consideration. Eventually it was decided to embody in the structure, both in general outline and decorative detail, the best features of the Italian Renaissance as represented by the Farnese Palace at Rome. The length of the building from the front façade on the pierhead to the city façade is 330 ft., the width of the former being 170 ft. and the latter 200 ft. The height from the basement is 125 ft., and from the foundations in the bed of the old George's Dock 170 ft.

The design of the building is the combined work of Messrs. Willink & Thicknesse, of Liverpool, and Messrs. Mewès & Davis, of London. The contract for the construction was entrusted to Messrs. Cubitt, of London.

We illustrated this great building in our issues of January 22 and 29, 1915, and consider that a detailed description of the accommodation provided is unnecessary. The Cunard Company is the pride of our mercantile marine, and all will be pleased that its prosperity and importance should be emphasised by the building of new offices. The plan of the new offices is an admirable example of architectural planning.

OBITUARY.

Mr. E. Thornton.

We regret to announce the death of Mr. Edward Thornton, F.R.I.B.A., which took place suddenly in his forty-seventh year. He was the third son of Sir James and Lady Thornton, and was articled to Mr. Rowland Plumbe, F.R.I.B.A. He worked for some years with Mr. A. H. Ryan Tenison, F.R.I.B.A., and for the past nineteen years has been in Calcutta, where he carried out many extensive works.

Mr. W. H. Hillyer.

We regret to announce the death of Mr. Wm. Harold Hillyer (Captain, R.E.), who was killed in action in France. Deceased was educated at Timsbury, Eastbourne, and Dover College. He served his articles with Mr. S. Clifford Tee, of Moorgate-street. He was assistant in Mr. Leonard Stokes's office, and later with Sir Aston Webb. He subsequently started on his own account, practising at No. 8, Buckingham-street, W C. Illustrations of his work, "Brantham Court, Suffolk," appeared in the *Builder* on March 12, 1915.

Mr. E. Willmott.

We regret to announce the death on June 12, at Bramleys, Little Kingshill, Great Missenden, Bucks, of Mr. Ernest Willmott, of Raymond-buildings, Gray's Inn, W.C., aged forty-five years. Mr. Willmott was elected a Fellow of the Royal Institute of British Architects in 1906. He was the architect of the New House, Lympne, for Sir Philip Sassoon, Bart. (conjointly with Mr. Herbert Baker, of Cape Town, South Africa); of the Orphanage, All Saints' Convent, London Colney, near St. Albans, for sixty girls and the resident members of the Sisterhood; houses at Meadway and Great Berkhampsted; and Nos. 80-3, Margaret-street, St. Marylebone, W., for the All Saints' Sisterhood and Religious and Charitable Community. Mr. Willmott brought out five years ago a book on the subject of "English House Design."

GENERAL NEWS.

Professional Announcement.

Mr. Ernest G. Theakston has removed his offices to 12, New-court, Carey-street, Lincoln's Inn, London, W.C. His telephone number is Central 660.

Discovery at Wetherby.

During the making of foundations for the new Council School at Wetherby an ancient stone was found. It is of the Decorated period. At some time, it is stated, it has evidently been used for decorative work above the door or window of some church or abbey.

Arts and Crafts Exhibition Society.

With reference to the forthcoming Exhibition of the Arts and Crafts Exhibition Society in the Galleries of the Royal Academy in the autumn, it may be observed that the Exhibition will be open to all craftsmen, whether members of the Society or not, and that works will be received and exhibited under conditions similar to those of the Summer Exhibitions at the Royal Academy. The address of the Secretary, Professor E. S. Prior, A.R.A., is 1, Hare-court, Temple, E.C.

Architects' and Surveyors' Company in the King's Royal Rifles.

Those of our readers who are liable to be called up at immediate notice under the Military Service Act will be interested to learn that arrangements have been made for the formation of a company of Architects and Surveyors in connection with the 22nd (Res.) Battalion King's Royal Rifle Corps. It need hardly be pointed out that it is of great advantage to recruits to be able to join a company composed of men of their own class, military life under such conditions being much more pleasant. Lieut. and Quartermaster H. G. James (with the permission of the Commanding Officer, Lieut.-Colonel L. Whitehead) has the arrangements in hand, and readers desirous of joining the new company should communicate with him at Norfolk House, Laurence Pountney-hill, Cannon-street, London, E.C. It is necessary to make immediate application. The duties of the battalion are largely in connection with field engineering. The training-ground is at Wimbledon.

Leonardo da Vinci.

On the 15th inst. Mr. Selwyn Brinton gave to the members of the Italian Circle of the Lyceum Club a lecture on "Leonardo da Vinci as Artist and Thinker." The lecture was illustrated by some thirty lantern slides from the pictures and drawings of the master, including some of his studies of flight, from the "Codex Atlanticus." The lecturer, in his concluding remarks, said: "One point has become more clear in my own mind during my recent study of Leonardo. We have seen Pater, Symonds, Muther, and others allude to the unfathomable quality in Leonardo, and I myself, when I published my study of Leonardo and his followers (in 1900), felt very intensely this quality of mystery. But, thinking over this point, it has occurred to me that there is on one side a very clear and sufficient explanation. The Italian genius for three centuries had climbed up to the perfect means of art expression. With Leonardo it had reached the summit; it looked on its own achievement—out and beyond, to the unconquered domain, a forest of shadows and dark mysterious depths, yet unexplored, of nature and of science. Leonardo definitely marks the spirit of modern science in his test of experiment as the only true method. 'It is experience,' he writes, 'alone that leads to simplification, by ways that are frequently very intricate.' But he stops, baffled, driven back on himself by causes beyond his control; by war, anarchy, even worse than these—the free spirit of thought fettered and chained—the Inquisition established in Italy as a method of government; the mind of his age refusing his great gift to it of splendid, illimitable progress."—A vote of thanks to the lecturer was proposed by Mr. A. G. Temple, Director of the Guildhall Gallery of Art, seconded by Mr. W. Warry Stone, and agreed to unanimously.

Masons' Company.

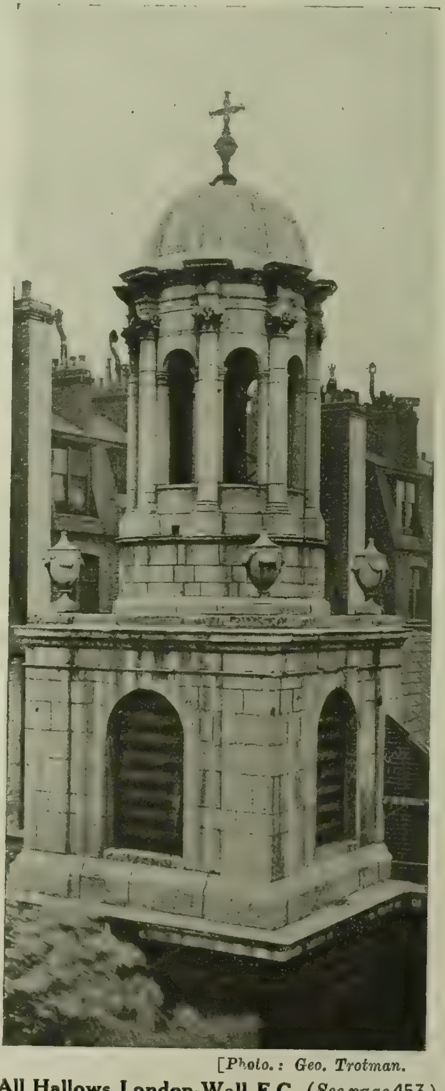
Mr. G. H. Judd has been elected Master of the Masons' Company; the Lord Mayor, Upper Warden; and Mr. Robert L. Hunter, Renter Warden.

"Concrete and Constructional Engineering."

We have received a copy of the June issue of *Concrete and Constructional Engineering* which contains, amongst other useful and interesting material, an illustrated article on the "King's College for Women, Kensington," by Mr. Ernest G. W. Souster, A.R.I.B.A.; Part II. of a valuable article entitled "Researches on Reinforced Concrete Beams, with New Formulæ for Resistance to Shear," by Mr. Oscar Faber, D.Sc., A.M.Inst.C.E.; and an interesting article—the third of a series—under the heading of "Concrete the Money-Saver." This contribution deals with the adaptability of local materials and their application for general purposes, and it is well illustrated. The author of the article is Mr. Thomas Potter.

Town Planning at Chelmsford.

The Chelmsford Town Council have adopted a report from the Town Planning Committee which stated that, having discussed the question of applying to the Local Government Board for sanction to prepare a town-planning scheme, they had deferred the further consideration of that matter. In the meantime they had requested the Chairman, Town Clerk, and Surveyor (Mr. Percival T. Harrison) to have an informal interview with representatives of the Great Eastern Railway to ascertain what developments are likely to be made by the company in Chelmsford in the future, in order that, if possible, these may be made in conjunction with proposals which the Town Council may subsequently desire to insert in a town-planning scheme.



[*Photo.: Geo. Trotman.*

All Hallows, London-Wall, E.C. (*See page* 453.)

South African Hospital.

The South African Military Hospital
just been officially handed over to the W
Office. The hospital has accommodation
304 beds. The architect is Mr. Allison, a
Mr. McFerran is the engineer.

Organisation of British Engineering Industr

Mr. F. Dudley Docker, C.B., Chairman
the Metropolitan Carriage, Wagon, and Finar
Company, Ltd., has joined the Committee
the Council for the Organisation of Briti
Engineering Industry.

Mr. Ernest Newton, A.R.A.

The Minister of Munitions has appoint
Mr. Ernest Newton, A.R.A., President of t
Royal Institute of British Architects, in
voluntary capacity to advise the Ministry
various problems arising out of the stoppa
of private building operations.

Reconstruction after the War.

"Reconstruction after the War" was t
subject of a lecture delivered by Profess
Patrick Geddes in the Royal High Scho
Edinburgh, recently. Professor Geddes sa
that the military preparations of Europe befo
the war were reckoned as the equivalent in co
and labour of ten Panama Canals per annu
and now, in war-time, certainly at least 1
probably more. Thus the war revealed to
the magnitude of our possible reconstructi
resources and energies. Strange as was t
economic paradox, the great constructions
the world had by no means always been ma
in time of peace and wealth, but rather aft
war and in poverty. The French architects a
town-planners had long been busy, so that t
exposition of the cities reconstituted was open
by the French President recently.

Memorials to Admiral Cradock.

The memorial to Admiral Sir Christoph
Cradock that Lord Zetland unveiled in Yo
Minster on June 16 is placed beneath the o
chimney clock in the north transept. It
the joint work of Mr. F. W. Pomeroy, A.R.
and Mr. Walter Tapper, F.R.I.B.A., archite
to the dean and chapter, and consists of
mural tablet, 12 ft. 6 in. by 6 ft. 6 in., of pu
Derbyshire alabaster; the central panel bea
a bust, executed in Saravazzi marble, of t
late admiral, and in niches at the sides a
gilded figures of loyalty and courage. T
inscription commemorates the Admira
gallant attack, when in command of the *Go*
Hope, of the enemy's forces off Coronel, ne
the Falkland Islands, on November 1, 191
The marble tablet recently set up in Hartfor
Church, near Richmond, Yorks, was design
by Mr. W. S. Weatherley, F.R.I.B.A., a
executed by Messrs. John Underwood & So
of Baker-street, W., in Rosso Antico marbl
and marble from the ancient quarries ne
Athens.

The Leeds and West Yorkshire Architectur Society

The annual general meeting of this Socie
was held on June 15 at No. 5, Greek-stree
Leeds, Mr. G. F. Bowman in the chair. M
Whitehead presented the annual Report
the work done by the Society for the past yea
and mentioned the fact that at last the Depar
ment of Architecture at the Leeds School
Art, under Mr. G. J. Coombs, has receiv
recognition from the Royal Institute of Britis
Architects, and is the first provincial school
art to obtain same. Mr. R. Fielding Farr
presented the annual balance-sheet, which w
adopted, and it was proposed, seconded, a
approved that a sum of £150 be invested
the War Loan. The following officers we
elected for the ensuing year:—

President—Mr. G. Fredk. Bowman.

Vice-Presidents—Messrs. J. F. Walsh, F.S.
C. B. Howdill, A.R.I.B.A.

Hon. Treasurer—Mr. R. Fielding Farra
A.R.I.B.A.

Hon. Librarian—Mr. G. J. Coombs, A.R.C.

Hon. Secretary—Mr. Wm. Whitehea
A.R.I.B.A.

And the following members of the Council-
Messrs. W. J. Morley, F.R.I.B.A., W.
Smithson, A.R.I.B.A., J. C. Procter, A.R.I.B.A
J. F. Braithwaite, A.R.I.B.A., W. Alban Jone
and Douglas Bowman (Associate member).

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ILLUSTRATIONS.

The Charing Cross Improvement.

THE sketch suggests some of the possibilities which a great clearing-out scheme at Charing Cross would bring about. Not only would the utlook from existing properties, such as the ational Liberal Club, Whitehall Court, and the otel Cecil, be vastly improved, but new building tes of the greatest value would be created. The te on the eastern side of the new *place*, corresponding with that of the National Liberal lub to the west, would be an ideal one for a reat hotel or club. Between this and the otel Cecil a shallow crescent of new buildings ight be built which would form either plendid suites of residential chambers or even great public building. Overlooking the public ardens of the Embankment and accessible from he Strand level this position would be one of utstanding importance and value. Then the ngle building where the new street up to the trand joins Northumberland-avenue would ave a commanding outlook, whilst the new rontages created on each side of this new treet would be of exceptional value.

The other aspects of the scheme—the nbroken continuity of the Embankment ardens—the creation of a great *place*—the evelopment of a magnificent vista from rafalgar-square, down Northumberland-venue, across a great road bridge to the outh side of the river, possibly leading p to an Imperial Senate House—the rection of a National Memorial Chapel o our fallen soldiers in the centre of the *place*, s suggested by Mr. Lewis Hind in the *Daily Chronicle*—these are some of the artistic assets f the scheme.

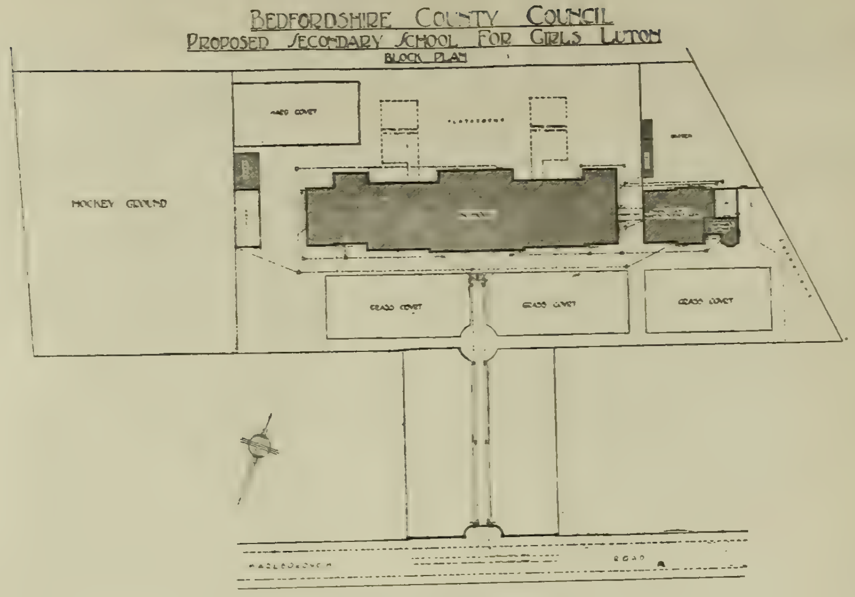
It is difficult to see how any scheme for a high-level bridge could be generally approved. Having once got rid of the present "red oxide behemoth," with the congested mass of mean buildings and underground tunnels and arches behind them, could it possibly be wise to obstruct the views and spoil the land values once more for the doubtful result of cutting off the direct communication between the embankment and the new bridge?

Surely, if ever in the history of London there has arisen an opportunity to stir the pulses and rouse the imagination of her citizens it is to be found in the present issue at Charing Cross. In applying for leave to tinker up and preserve the bridge I cannot but believe that the railway company are riding for a fall. And almost one thinks that if London does not wake up to its chances at such a time as this it deserves the fate which will befall it.

T. RAFFLES DAVISON.

The Work of Sir R. Rowand Anderson, LL.D.

WE give three illustrations of work by Sir R. Rowand Anderson, LL.D., this year's Gold Medallist. We should have liked to give much fuller illustrations of the contribution which Sir Rowand has made to the sum of modern architecture, and hope at a later date to illustrate some of his other work.



First Premiated Design.

By Messrs. J. R. Brown & Son.

Drawings by C. E. Mallows.

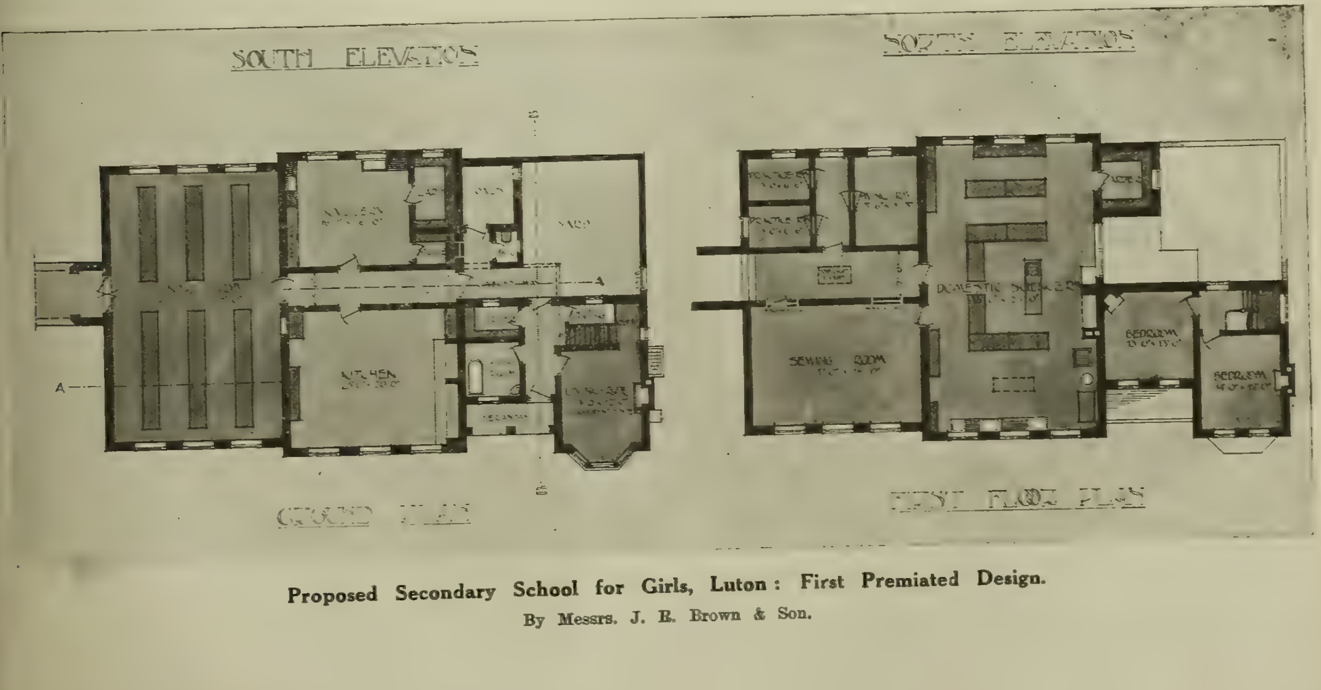
WE give a further selection of reproductions of the admirable collection of drawings by the late C. E. Mallows, whose untimely death is a loss to the architectural profession.

Luton Secondary School for Girls.

THE arrangement of plan, with a wide central corridor on each floor giving access to the several rooms, was adopted with a view to simplicity of design and efficiency in the general supervision of the school. The assembly hall, which is also to be used as a gymnasium, is placed within easy reach of all entrances, and in addition to the side windows has a large window at each end above level of adjoining flats, thus securing good lighting and ventilation. The classrooms are placed on the south side of the building. The architects are Messrs. J. R. Brown & Son, of Luton.

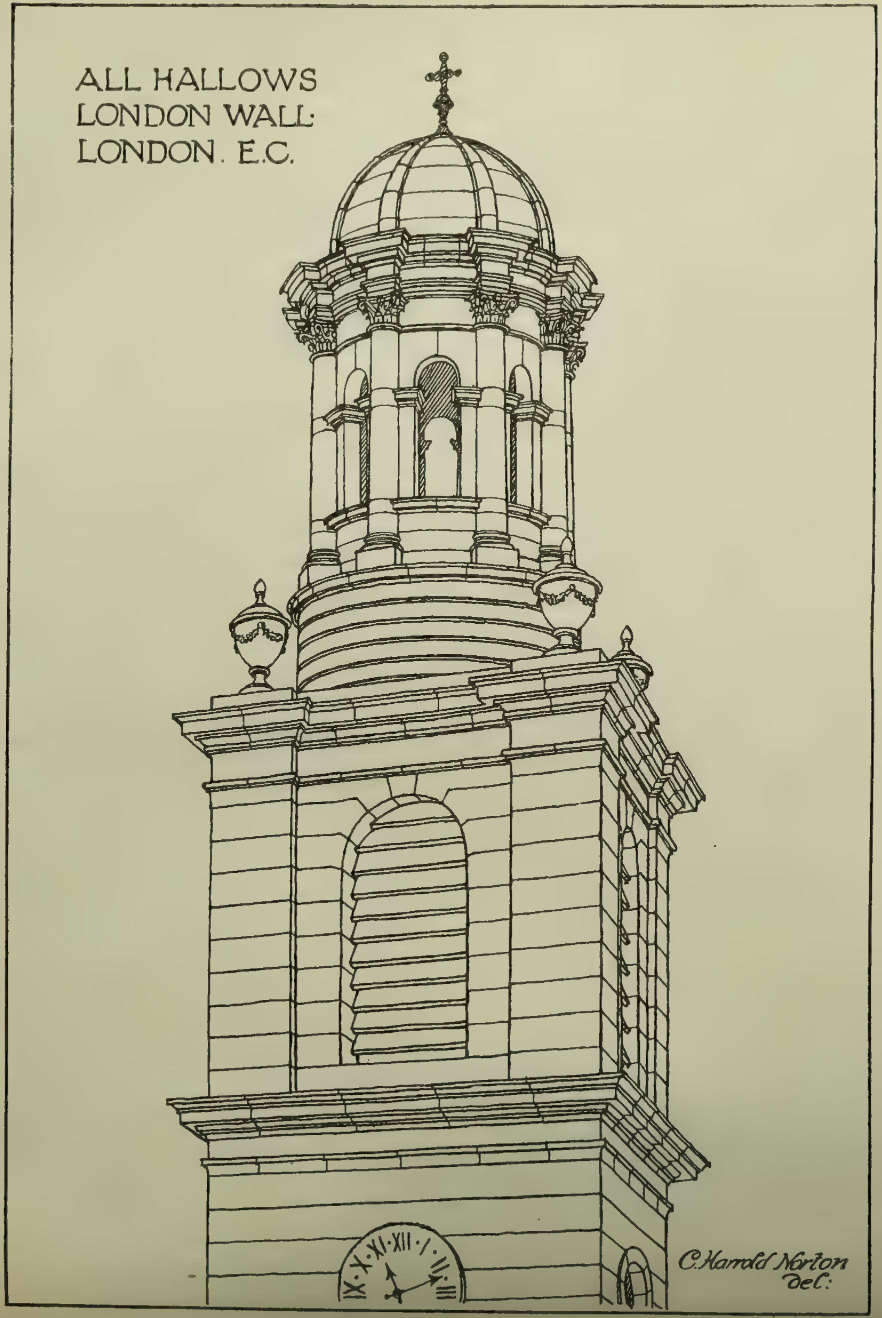
BOOK RECEIVED.

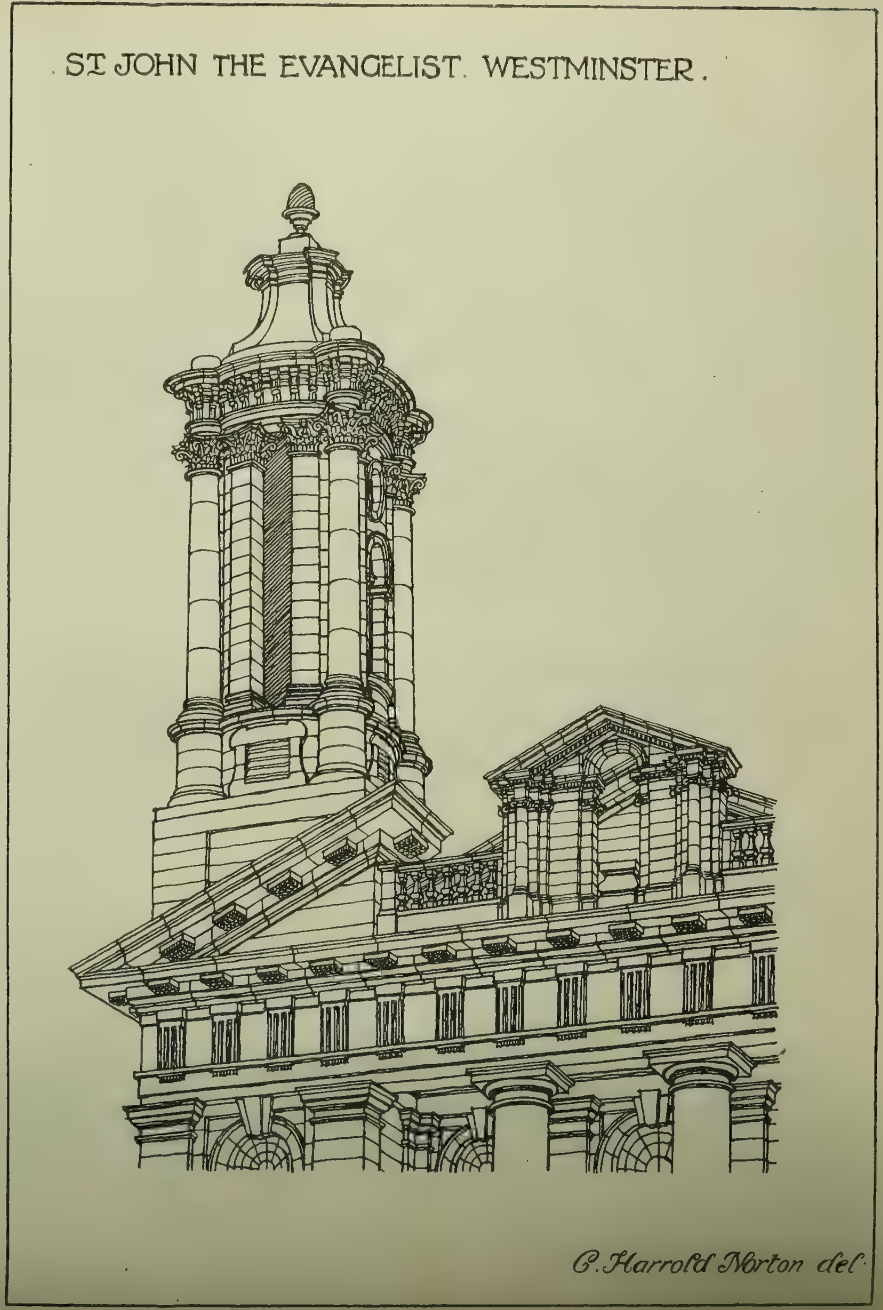
DISCOVERY: OR THE SPIRIT AND SERVICE OF SCIENCE. By R. A. Gregory. (London: Macmillan & Co., Ltd. 5s. net.)



Proposed Secondary School for Girls, Luton: First Premiated Design.

By Messrs. J. R. Brown & Son.




ST JOHN THE EVANGELIST. WESTMINSTER.
C. Harrold Norton del.

The London Churches of Wren and Later Architects of the Renaissance. (*See page* 453.)

ral MEETING of the Royal Institute Architects was held on Monday Conduit-street. Mr. Ernest Newton in the chair.

Deceased Members.

y Dawber said that before coming dinary business he would ask the record its profound sorrow at the stitute had sustained by the tragic Lord Kitchener and Sir H. F. Lord Kitchener was elected an ow of the Institute in 1910, and Sir onaldson, who perished with him, an Hon. Associate since 1896. At Planning Conference held at the n 1910 Lord Kitchener, who was held very enlightened views on the ook the chair at one of the meetings per on the planning of Khartoum and he himself contributed a most r address. Sir H. F. Donaldson touch with the Institute in 1895 at the brickwork tests. He was then the London and India Docks Joint , and he secured them the use of a ground on which to conduct their ts, and he took an active part in iments, which brought out some nts.

te of condolence was passed in

wber also announced the deaths of ard Thornton, of Calcutta, elected te in 1892 and Fellow in 1904; and . Willmott, Fellow, elected in 1906.

Presentation of the Royal Gold Medal.

esident said: "My Lord Provost. d Gentlemen,—We are assembled afternoon to do honour to a tish architect, Sir Rowand Ander- regret very much, and I am you regret also, the absence wand on account of illness, and will wish those who represent is occasion to convey to him our and to tell him that, although his s given us the pleasure of welcom- obert Inches, the Lord Provost of n, who has so kindly honoured us by pressly to receive the medal on Sir behalf, and Mr. Lorne Campbell, ead Sir Rowand's address, we were rward to the occasion as an oppor- testifying personally to him our for his work as an architect and riation of the great services he has do architecture. This is the second which I have had the honour of the Royal Gold Medal, and each s had this special point of interest. the recipient was Mr. Frank ho was the first Canadian architect this mark of the esteem of the titute of British Architects. This medal in being conferred on Sir Anderson goes for the first time Border.

ione of those occasions on which the r is not expected to do more than prefatory remarks before present- dal, and he then leaves the field to it Sir Rowand Anderson has had g and distinguished career that it is condense even introductory remarks oming length. He was born in the ear 18 and I have obtained from him, in his own words, the following interesting sketch of his career :—

"Like some others, I was not brought up to architecture in the recognised way—that is, by means of an apprenticeship—but was articled to a lawyer in the hope that I would follow a legal career. After four years spent in what to me was the most uncongenial work, my parents recognised the inevitable and allowed me to follow the profession of architecture.

I became a pupil of a teacher of architectural drawing, and entered also the Architectural Section of the School of the Board of Manufactures, the precursor of most of the schools of design in this country. I afterwards left for a year's residence in Italy and France, where I spent my time in measuring and drawing work of the Renaissance and Mediæval periods.

On returning to Edinburgh I spent some time in several offices, took part in some competitions, gained some and lost others. In 1875, when the new schools were being built under the Education Department, I was invited to enter a limited competition of six. I came out first, and the carrying out of three of the largest schools was entrusted to me.

In 1878 the University of Edinburgh launched a large new scheme for housing all their medical classes in one building, and invited six architects to submit plans for the same. I was one of them. Previous to preparing my plans I made an extensive tour in Germany, France, and Holland to examine and make myself acquainted with the new buildings that had been erected at the centres of education there, so that my design might be applied to the new methods of teaching.

My plan, which was based entirely on the use to be made of these buildings, carried the day, and I was appointed architect. Later on I was asked to design and carry out the great Graduation Hall, known as the McEwan Hall, and other buildings for the University, and also for the University College at Dundee.

As architect to the Board of Manufactures I designed and carried out the Scottish National Portrait Gallery and National Museum of Antiquities, Edinburgh; also the restoration of the cathedral at Dunblane, which at the time was under their jurisdiction. These were followed by a number of public and private buildings."

A complete list of Sir Rowand's works will appear in our *Journal*, but amongst them the following demand particular mention :—

Public Buildings.—New Medical School, Edinburgh University. He won this in competition, and the buildings have cost in all nearly £1,000,000. (Included in this group is the well-known McEwan Hall.) The Central Station Hotel, Glasgow; the Scottish Conservative Club, Edinburgh; the National Portrait Gallery, Edinburgh; the Pollokshaws Town Hall.

Churches.—The Catholic Apostolic Church, Edinburgh; the Govan Parish Church; St. Paul's Church, Greenock; Glencorse Parish Church; Inchinnan Parish Church; St. James's Episcopal Church, Inverleith; the Episcopal Church, Stirling; the Episcopal Church, Colinton; the Episcopal Church of St. Andrew's, Kelso; the Episcopal Church, Forfar; the Episcopal Church of St. Augustine, Dumbarton; the Episcopal Cathedral Church of St. Andrews; All Saints' Church, Parsonage, and Schools, Edinburgh; St. Margaret's Roman Catholic Church, Dunfermline.

Public Memorials. — The Buccleuch Memorial, Edinburgh; the Montrose Memorial, Edinburgh; the Inglis Memorial, Edinburgh.

Domestic Work.—Mount Stuart House, for the Marquis of Bute; a mansion at Glencoe for Lord Mountstephen.

Restorations.—He has carried out important restorations at Dunblane Cathedral; King's College Chapel, Aberdeen; Bothwell Collegiate Church, and at Jedburgh and Kelso.

Schools.—In the early part of his career he carried out several large schools for the Edinburgh School Board.

One might have thought that the carrying out of such a formidable list of important works would have been sufficient to absorb the energies of any ordinary man, but, with all these heavy responsibilities, he nevertheless found time to devote to the improvement of architectural education in Scotland.

The Edinburgh School of Applied Art, now merged in the Architectural Section of the Edinburgh College of Art, owes more to him than to any other man, and many of the schools since started throughout the country are based on the principles laid down by him.

He presented a valuable collection of architectural books and casts to the School, as well as a large number of measured drawings of Scottish ecclesiastical and mediæval buildings, prepared at his own cost. These drawings now form the greater part of the collection of the National Art Survey of Scotland; they are of great educational value, and a lasting record of buildings many of which have already disappeared.

I wish I could speak from a personal knowledge of Sir Rowand's actual buildings, but such is my incurable distaste for travel and adventure that I blush to have to confess that it is more than forty years since I made my first and only visit to what was then rather a far country. I will therefore avail myself of the appreciation of one who has been more fortunate in this respect than I have, and who gives as the characteristic quality of his work its evident integrity, each building being thought out for its special purpose with a simplicity and directness of conception which dominates the whole design, the beauty of any particular *motif* or the careful study of its detail never being allowed undue prominence, each work being eloquent of the conscientious study of the requirements and purposes of the building and of his knowledge of and sympathy with the various crafts employed.

It is not too much to say that his work and teaching have not only influenced large numbers of architects now in practice, but that many of the building firms in Scotland owe their capacity for fine craftsmanship and selection of material to his work and guidance.

As a proof that this high view of Sir Rowand's attainments is shared by others outside Great Britain it is only necessary to mention that he has been awarded medals in Paris, Munich, and Chicago. Our own country, true to her traditions, is the last instead of the first to mark the appreciation which it has long felt for one of Scotland's most eminent architects.

My Lord Provost, I now have the pleasure of presenting this—His Majesty the King's Gold Medal for Architecture—to you as representing Sir Rowand Anderson. I should like you to tell him that it was awarded to him by the unanimous vote of the Council and of the members of the Royal Institute of British Architects, and that we are proud to have his name on the roll of those who have been honoured by this distinction."

The President then presented the Gold Medal to the Lord Provost of Edinburgh for Sir Rowand Anderson.

Appreciation by Sir Aston Webb.

A letter was read by the President from Sir Aston Webb, who expressed regret at his inability to be present. He said he had had the honour of knowing Sir Rowand Anderson for some years, and asked to be permitted to take the opportunity of expressing his respectful admiration for his work, not only as an architect—in which he, of course, excelled—but also for his work in the cause of education and for the high example he had set for them during his long life.

Address by Sir Rowand Anderson.

Mr. Lorne Campbell, who read an address prepared by Sir Rowand Anderson, prefaced his task by expressing the regrets of Sir Rowand at his inability to attend. Sir Rowand had asked him to read the address as a fellow-architect and a personal friend.

Sir Rowand Anderson wrote :—

"Mr. President, Ladies, and Gentlemen,—This unexpected and great honour which has come to me from the King acting on the advice of this Institute, and the generous and appreciative remarks of the President, and the reception you have given to them, make it very difficult for me to frame an adequate reply.

This Gold Medal may be justly looked upon as the blue ribbon of the profession. It is not a political or social honour like the blue ribbon of the Order of the Garter, of which Lord Melbourne, Queen Victoria's first Prime Minister, on the occasion of the selection of someone to fill a vacancy in that exalted Order, said there was no difficulty in making a selection, as there was no 'damned merit' about it. Now, quite the contrary is the case here. Merit, you say, is the sole title recognised by this Institute. The difficulty in making a selection from a body where so many are worthy of the honour is great, and on the list there is no name that does not reflect the care with which it has been chosen and with which it is not a great honour to be associated.

Our President has told us that this is the first time that the Royal Gold Medal has crossed the Border. That is an additional reason why I should feel proud to be the one selected for it, and this unique event gives me an opportunity for pointing out to you that, although this is the first time that such an honour has crossed the Tweed northwards, there has been a steady flow southwards from Scotland of much architectural talent, contributing greatly to the advancement of our art. From the time of the Union of England and Scotland, which was largely accomplished by intrigue and bribery, but has nevertheless resulted in great blessings to Scotland as well as to England, the road to the South became the great highway for Scotsmen in search of fame and fortune, and, in spite of much opposition and prejudice, many found them.

The first man I should refer to is Sir William Bruce, of Kinross, a contemporary of Sir Christopher Wren. His connection with England is very slight. He appears to have done some work at Ham House, in Surrey, for Lady Dysart.

The next name of any consequence is James Gibbs, of Aberdeen, born 1674, died 1754. He studied for some years in Rome, and returned to London in 1710, where, under the influence of his early patron John Erskine, Earl of Mar, he soon rose to fame.

Colin Campbell, a Glasgow architect, well known as the author of *Vitruvius Britannicus*, under the patronage of the great chief of his clan, the Duke of Argyll, removed to London and carried on a considerable business as an architect.

The Mylne family have a long and continuous connection with building and architecture. A Mylne appears as master mason to King James III. of Scotland. His family can be traced down to the end of the eighteenth century, and had a hand in almost everything, such as royal palaces and castles, town halls, etc., etc., and many bridges. Robert Mylne, a descendant of the master mason of King James III., was born in Edinburgh in 1733. After about four years studying architecture in various parts he returned to England in time to take part in a competition for the new Blackfriars Bridge, and was successful against sixty-nine competitors. From this time work flowed in on him, and in 1766 he was appointed Surveyor to St. Paul's Cathedral, and it was he who suggested the widely-known epitaph to Sir Christopher Wren. He has a further claim to the remembrance of this Institute, as he was an original member of the Architects' Club, founded in 1791, which dined once a month in the Thatched House Tavern during the season, out of which gathering grew the present Institute.

The next best known name is that of Adam: the three sons of William Adam, of Maryburgh, in Fife, an architect of great repute, with many good buildings to his credit. These brothers made their descent on London in 1768. Their influence on architecture exists to the present day. A Wren church and an Adam house still hold their own.

I could prolong this list, but will close it with the names of two men who have done much to deserve to be remembered and held in esteem—the late R. Norman Shaw and J. M. Brydon, both of them my countrymen.

You have been good enough to include my services to architectural education as one of the qualifications for my receiving this Gold Medal. I acknowledge most gratefully your reference to this. I began to take an interest in architectural education in 1892. South Kensington up to that time had the entire control of art education, but the education they gave never seemed to produce any result beneficial to the architectural student, and it is not difficult to see why this was so. The system of payment by results poisoned the whole thing. The teacher's income rose and fell according to the number of the prize drawings produced by the student. These had to be worked up to a standard of excellence, as drawings, to meet the views of the examiners in London. So it eventually came to pass that the school existed for the benefit of the teacher more than for the taught. The hopelessness of expecting anything to come out of this system of teaching as regards architecture culminated in 1892. A number of architects and others, including myself, with the aid of the Board of Manufactures, then combined to start a school entirely free from the baneful influence of South Kensington. I should here inform you that the Board of Manufactures came into existence about the time of the Union of Scotland and England, and administered some of the money known as the Equivalent Grant for the Advancement of the Arts and Industries of Scotland. In addition to what this Board was able to do for us, a fair amount of money was subscribed by those interested in this new departure. But the scheme was nearly wrecked by the difficulty of getting a Director of sufficient standing and acquirements for such a salary as we could afford. So, to prevent the collapse of this promising movement, I was asked, and undertook, to act as Honorary Director. I gave as much time as I could possibly spare to what has always been to me interesting work. With the assistance of one or two paid teachers a start was made. From the very first the scheme caught on. It gradually became recognised by the student as the best means of getting an education to supplement what he was acquiring as a pupil or apprentice in a private office. It would take up too much of your time if I gave a detailed account of the school work, but I shall allude to one or two of the leading features of it. In the beginning of my architectural career I kept myself in contact with the best work of the past by spending all my spare time in sketching and measuring both at home and abroad, including a year in Italy and France. There was no golfing for youth in those days. Knowing the benefit I derived from this, I thought we could not do better than make the study of old work the basis of our teaching. With the consent of the committee this was done.

Another important feature in our teaching was the organising of a scheme for obtaining accurate records of buildings erected previous to the eighteenth century. This was called a National Art Survey. It was a very ambitious scheme, but it worked out all right. Two of the best draughtsmen were selected annually, and to enable them to devote their entire time to this they were paid small salaries, and in addition an allowance for travelling and incidental expenses. All the drawings made by them became the property of the school. This work has been going on since 1894, but has been stopped for the last two years owing to the war. There are now something like two thousand sheets, forming, I should say, the finest collection in this country. It contains, in addition to the surveys of the buildings, a large collection of drawings and details of early plaster-work, wall panellings, fireplaces, and a most interesting collection of old furniture to be found in buildings still inhabited. The result of all this has been most stimulating. I never knew a more enthusiastic or industrious set of students. The work they produced was of a very high standard of excellence, and some of them secured many of the coveted prizes which you offer here to competitors from all quarters. On leaving school the students have always been greatly sought after as assistants. They are scattered all over Britain and its colonies, and from letters I have often received they all attribute their success to the sound practical education they had received.

I have always contended that the degree of beauty we see in our buildings and the satisfaction we derive from them depend largely on their fitness and the more or less successful expression of the purposes that call them into existence. One or two examples from my own town of Edinburgh will bring my meaning home to you. Take the Royal High School and the Surgeons' Hall, both of which belong to the period of the Greek revival. They were designed by men thoroughly educated in the art of their day. Looked at as abstract pieces of design they are of the highest order, but the façades of these buildings are not the product of the buildings they are attached to. They are mere screens to mask what is behind them, and that might have been anything other than what is actually there. Now, let us take a look at the great valley that divides the old from the new town. Overhanging the steep cliffs of the Calton Hill is seen what looks like a castle. As a matter of fact it is mistaken by many who enter Edinburgh for the first time by the North British Railway to be the world-wide-known Edinburgh Castle. It is actually the Calton Jail. I remember meeting the late Mr. Billings, the architect, and author of "The Baronial and Ecclesiastical Antiquities of Scotland," a work which had a great influence on the domestic architecture of Scotland for many years during the last century. I had just before then seen a building of his erected for a waterwork. It took the form of a castle. I asked him why he made this work like a castle and not something evolved out of the use of the building. He replied, "Can you tell me what a waterwork is like, as I must have a type to work from?" As I could not do so or convince him that, as he ought not to build a waterwork like a castle, he might at least approximate to something characteristic of the purpose of the building, I had to retire from the dispute, leaving Mr. Billings quite satisfied that his imitation castle with a high tower was a very good representative of a water-pumping station. The architect of the Calton Jail, the building I have referred to, under the influence of the prevailing taste of the day, must have looked at the problem he had to solve from the standpoint of working from a type, and so he chose a castle, but, as a castle is a building to keep people out and a jail to keep people in, see what a deplorable result: one of the finest sites in the world covered with a toy castle, devoid of expression and utterly meaningless.

Again, if you take the plans of the old Scottish castles or mansions of the sixteenth and seventeenth centuries, you can read them like a book from the foundations to the chimney-pots. You can distinguish the original tower that the family once lived in and held its own against all comers. On further examination you will notice an addition made when the family became richer and times were not so warlike. As time rolled on and it was no longer necessary to provide for defence you will find larger additions. But now everything is done for comfort, as understood in those days, and a peaceful country life, the whole group becoming wonderfully picturesque; but it was never built to look picturesque or interesting; it was built from time to time to suit the necessities of the day and the means of the family, and hence its resulting picturesqueness. Contrast with this the mansions erected in imitation of the old ones, and try to read them from the inside to the outside or the reverse. You cannot do so, as the one contradicts the other. The whole thing is a modern house, a very modern house masquerading as a castle of a territoria baron, and so you have everything in these buildings that is false, misunderstood, and misapplied, the result being a costly delusion that such a building is true art and i harmony with the traditions and scenery o the country.

The aim of the teaching in the school wa to counteract this sort of thing by teaching the students to look at buildings with a analytical eye and to dissect them as medical student does his anatomy, and t realise the ideas and purposes that call th buildings into existence. The seed sown b this school and others which have wisel adopted our system of teaching was bearing good fruit before the outbreak of this terrible and unjustifiable war, and there were signs everywhere in Scotland that we had begun to develop architecture, especially in domestic work, on right lines with a distinct national bias. The contention that Gothic and not Italian, or *vice versâ*, was the only state fit to be used in this country has spent itself, and there is now better Gothic and Renaissance work being done than during the period of the Battle of the Styles, as well as a growing absence of those inconsistencies I have alluded to, and I believe we can now look forward to our buildings becoming more and more characteristic of their age and purpose. With these few and inadequate remarks I again offer my grateful thanks to His Most Gracious Majesty and to this Institute for the great honour conferred upon me to-day, an honour well worth a lifetime of earnest labour and thought, to advance art."

Sir J. Burnet, in proposing a vote of thanks to the Lord Provost of Edinburgh, said the inception of the School of Applied Art in 1892 was due to Sir Rowand Anderson, and, although he was supported by others in his scheme, had it not been for Sir Rowand undertaking to act as Honorary Director the School could not have been carried on. That he should have found time to fulfil the duties of such a post and to continue as a member of the College of Art until 1913, thus giving those many years to the cause of architectural education, was all the more remarkable when it was remembered that during those years his greatest work was being carried out. That the head of the great Corporation of Edinburgh should come specially to London to receive the Gold Medal on behalf of Sir Rowand was a proof of the esteem and respect in which he was held in Scotland.

Mr. J. A. Gotch, in seconding the motion, remarked that it must be a great privilege and a great delight to be Lord Provost of Edinburgh—a city full of ornaments so renowned in history and blending in so singular a way the charm of the past and the prosperity of the present. To the lovers of Scott Edinburgh must always be a city of enchantment, and he was sure they were all convinced that such a noble heritage could not have fallen into better hands.

The vote was carried unanimously.

The Lord Provost, in reply, said it had given him great pleasure to come there and take possession of that Gold Medal. He was associated with Sir Rowand Anderson in the starting of the Applied Arts School, and nothing was more gratifying to the citizens of Edinburgh, and especially to those who took an interest in applied art, than the fact that he came forward and offered himself as Director of the School. He did that without fee or reward, and he presented very many valuable specimens, not only in the way of photographs and drawings of architecture, but pieces of colour, because colour scheme was a great part of their scheme. Sir Rowand Anderson devoted night after night to the instruction of those students, and he (the speaker) believed that many of them took prizes either from the R.I.B.A. or some other institute in London. It was impossible sufficiently to express their gratitude to Sir Rowand for all he had done for Edinburgh, and particularly for what he had done to improve not only the architecture but the architects of the city. He had always been a tower of strength, and he had never been known to give way on a point that he thought was really vital in the matter of architecture. He had presented the city with four halberds, which were always carried in front of the Lord Provost, etchings of which were hanging in that hall. He could assure them that he had come there with the greatest pleasure; his only regret was that Sir Rowand Anderson was not able to be there himself. When, however, they considered that he was eighty-three years of age, and that he had been a man who had worked up to the last, they would agree that when the doctor told him he was not to come the best thing he could do was to stay at home.

The President said that was the last meeting of the session, and the arrangements for the new session would be published in due course.

WAGES IN THE BUILDING TRADE.

Birkenhead.—At the recent quarterly meeting of the National Board of Conciliation for the Building Trades an appeal was heard from the carpenters and joiners, stonemasons, and bricklayers of Birkenhead for an advance of wages and alterations of rules. The advances asked for were:—Carpenters and joiners from 11d. to 1s. 3d. per hour, masons from 11d. to 1s. 1d. per hour, bricklayers from 11d. to 1s. 1d. per hour. The case for the operatives was stated by Mr. Dobson (carpenters and joiners), supported by Messrs. Roberts and Robinson (carpenters and joiners), Tyles and Snape (bricklayers), Newnes and lamb (masons). The case for the employers was presented by Mr. Snape, supported by Mr. Fleming. The arguments and essential facts brought forward were substantially similar to those set out in the Liverpool case given below. After considering the evidence the Board decided:—"That the appellant operatives receive 1d. per hour advance as from May 1, 1916, the proposed alterations to the other rules being dropped."

Cheltenham.—Mr. Charles Doughty, the arbitrator appointed by the Board of Trade to decide certain matters in dispute between the Cheltenham Master Builders' Association and the Cheltenham Building Trades Joint Committee, issued his award on May 30, fixing the rates of wages to be paid as follows:—(1) Plasterers and plumbers, 9¾d. per hour, painters 9¼d. per hour; (2) labourers, 6½d. per hour, and scaffolders, stone-sawyers and drainers, 7d. per hour, and to these men, in addition, extra war wages of 4d. per day for every day upon which full time is worked at ordinary rates.

Erith, Dartford, and Bexley.—The arbitrator appointed by the Board of Trade to decide certain matters in dispute between the master and operative painters in these districts issued his award on June 5, deciding that the standard rate of wages to be paid to skilled painters and decorators shall be increased from 8d. to 9d. per hour, such increase to be regarded as war wages and recognised as due to and dependent on the existence of the abnormal conditions now prevailing in consequence of the war.

Liverpool.—An appeal by the carpenters and joiners, stonemasons, bricklayers, slaters, and wood-cutting machinists for an advance of wages and alterations to the working rules was heard by the National Board of Conciliation for the Building Trades at its recent quarterly meeting. Mr. Dobson (carpenters and joiners) conducted the case for the operatives, and was supported by Messrs. Wallis and Robinson (carpenters and joiners), McConville and Caulfield (bricklayers), Whittaker and Challoner (machinists), De Luce (slaters), Ashcroft and Foxcroft (masons). The demand for an advance of wages was of 2d. per hour, the existing rates being mostly 11d. per hour, the machinists, however, having a graded rate which they desired changing to a flat rate, and the slaters' existing rate being 10½d. per hour. The demand was based upon the state of trade, cost of living, and extraordinary conditions prevailing, especially in the shipping, where men were earning high wages. Facts and figures were advanced in support of the appellants' contentions, and the various proposed alterations in the rules were dealt with in detail and reasons given for their demand. For the employers Mr. Moss conducted the case, and was supported by Messrs. Brown, Stirling, Costain, Hall, Morrison, and Johnson, all employers in Liverpool. The defendants, whilst not unsympathetic to the claims advanced by the operatives, urged that this is not an opportune time to grant these demands. That if sympathy was due to the operatives in the present extraordinary circumstances, it was also due to the employers, who were being hit hardly by the fact of having pre-war contracts to carry out under war conditions and upon a rapidly rising and unstable market. There was a great decline of turnover in the building trade, but standing charges remained much the same. Labour was scarce, and not so effective in the matter of output as previously, and there was also the competition of lower-paid districts to contend with. The witnesses having retired, the Board considered the case, and the following was carried and became the decision of the Board:—"That the appellant operatives receive 1d. per hour advance as from May 1, 1916, the proposed alterations to the rules being dropped with the exception that the marble polishers be included in the masons' rules."

London.—At the recent quarterly meeting of the National Board of Conciliation for the Building Trades an appeal was heard from seven sections of the London operatives for an advance of wages and alterations of the working rules. The demands in respect of wages were:—Bricklayers for an increase from 11½d. to 1s. 1½d. per hour, carpenters and joiners from 11½d. to 1s. 1d. per hour, plasterers from 11½d. to 1s. 1½d. per hour, smiths and fitters from 9½d. and 10½d. to 1s. per hour, stonemasons from 11½d. to 1s. 1½d. per hour, labourers from 8d. to 10d. per hour. In the case of the wood-cutting machinists the appeal was for the insertion of a graded set of rates implying an advance of about 1d. per hour. The plasterers, not being affiliated to the Conciliation Scheme, were not represented at the hearing, but had agreed to accept whatever award was made to the other trades. The case for the appellants was stated by Mr. Stennett (carpenters and joiners), supported by Messrs. Murrey (stonemasons), Lane (bricklayers), Dagger (machinists), Haggerty (labourers), and Massey (smiths and fitters). The demand was based upon the same reasons as those advanced in the Liverpool case reported above, and upon the fact that provincial rates of wages in some of the large cities were up to or nearly up to London rates, whereas London was a relatively more costly place for the workers. The various alterations proposed in the other rules were explained and reasons given why they were desired. In the case of the machinists, the plea was for a substitution of a recognised machine rate instead of an unrecognised and fluctuating man rate. For the employers Mr. Renshaw replied, and was supported by Mr. Thorne. The arguments may be shortly stated by saying that in the respondents' opinion this was not an opportune time to consider demands of this kind, which they thought ought to stand over until after the war. They traversed the claim that London was a dearer place to live in than large provincial cities. The witnesses having retired, the Board considered the case and, after a deliberation lasting more than six hours, the following resolution was carried:—"That the appellant trades be granted an advance of 1d. per hour as from the termination of their respective notices, such advance to be for the period of the war and to continue until nine months after the declaration of peace, the rest of the rules to remain unaltered; but it shall be in order for either side, six months after the declaration of peace, to give notice, in the usual way, for an alteration of rules notwithstanding anything to the contrary in the rule as to notice therein contained." The respective dates of termination of notices are as follows:—Bricklayers, July 14, 1916; wood-cutting machinists, smiths and fitters and labourers, July 15, 1916; stonemasons and plasterers, July 17, 1916; carpenters and joiners, July 29, 1916.

Pontypridd.—An appeal by the carpenters and joiners of this district for an increase of wages of 2d. per hour was heard by the National Board of Conciliation for the Building Trades at its quarterly meeting. The operatives' case was stated by Mr. Williams, and was based upon similar grounds to those alleged in support of the Liverpool and London cases reported above. It was stated that there were no pre-war contracts and little work of any kind in hand, though much held up, and the argument was advanced that in view of present circumstances employers would not suffer in respect of existing commitments by giving an advance. For the employers Messrs. Julian and Jones stated the case, and objected to the demand on the ground that to grant it would kill what little trade now existed; they also feared the competition of neighbouring districts. The witnesses having retired, the Board considered the case and decided:—"That an advance of ½d. per hour be granted to the carpenters and joiners of Pontypridd as from May 1, 1916."

THE BUILDING TRADE.

SLAG AND ALLIED CEMENTS.

PREVIOUS articles under this heading have left undiscussed a special class of cements which, though unimportant as far as most building works are concerned, are of great value in special circumstances, and which, as far as the artificial class is in question, are likely to show development in the future. These are bodies known as pozzuolanas, which, while not actually cements themselves, have the power of developing hydraulic properties when mixed with lime. They can be conveniently discussed under the headings natural and artificial pozzuolanas, the former including the well-known material which formed the mortar of the buildings of ancient Rome, and which is still in use; the latter class being represented by cements made from blast-furnace slags. Both classes are very similar in composition, and consist of silica (SiO_2), alumina (Al_2O_3), with some iron oxide (Fe_2O_3), and a very variable proportion of lime (CaO).

Natural pozzuolanas owe their origin to what are termed by the geologist igneous rocks, *i.e.*, stones such as granite and basalt which have been in a molten condition at the time of their formation. The less important of these materials are represented by such products as arênes, a sand resulting from the decay of igneous stones, which has caused the decomposition of felspathic minerals, with the liberation and solution of alkalis, leaving a silicious and aluminous residue. Easily obtained, such materials are of local value; but the hydraulicity they are able to exhibit with lime is too small to admit of transit for wide application. The other members of this group which may be called natural pozzuolanas proper are of volcanic origin, *i.e.*, igneous stones which have cooled rapidly after ejectment from volcanoes, ancient or modern, or volcanic mud—dust from eruptions, which has been mixed with steam or water and converted into mud, subsequently hardened into rock by age and pressure of overlying materials. Of this volcanic mud trass may be taken as an example.

Sometimes quarried on the surface and sometimes mined at several hundred feet in depth, these materials vary considerably in the cost of production; but although mostly used locally, the export trade in these cements is not inappreciable. The process of manufacture consists of screening and then grinding the rock, which is sometimes also roasted, which operation improves its hydraulic properties. It is then mixed with dry slaked lime, when it is ready for use as a cement. Pozzuolanas are obtained not only from Italy, but from the Azores, the South of France, the Island of Santorin—which gives its name to the material thence obtained—and other places. The composition of these natural materials ranges approximately within the following limits:—Silica, 63 to 44 per cent.; alumina, 21 to 10 per cent.; iron oxide, 29 to 10 per cent.; lime, 18 to 2 per cent; magnesia, 5 per cent.; potash and soda, 11 to 4 per cent.; water, 9 to 3 per cent.

Artificial pozzuolanas include in addition to slag any argillaceous materials which can be burnt to yield products of a similar composition. Clay, for example, has been so used for large engineering works in situations where the cost of transit would have made the employment of Portland cement prohibitive, and very satisfactory results have been thus attained. Probably the classic example of such use is in the construction of the Asyût dam, where three parts of burnt ground-clay were used mixed with two parts of lime. The average tensile strength developed in inch briquettes of this cement is stated to be 272 lb. at one year, increasing to 320 lb. at two years, which compares favourably with many hydraulic limes in general use.

The most important cements here dealt with are, on account of the prospect of industrial development, those made from slag, which is produced in vast quantities in the manufacture of iron and steel, as an inevitable and very bulky waste product, for which very few uses have been so far found. Slags from metallurgical processes naturally differ very much in composition, but the basic slags formed in steel manufacture are silicates and aluminates of lime, and within certain limits of composition are suitable for cement manufacture.

Though not prepared to a large extent in this country, slag cements have a not inconsiderable sale in the United States, and there seems no reason why the British steel producers should not endeavour to foster this industry, which would be greatly to their advantage, by debating the possibility of producing slags possessing such regularity of composition as would render the cements obtained from them acceptable to engineers and architects.

Le Chatelier has stated that the compound in slag cements which confers hydraulicity is $3CaO\ Al_2O_3\ 2SiO_2$; and Eckel quotes the specification of an American firm, which states that the combined percentage of lime and alumina in the slag employed must not exceed 49, while that of the alumina alone must be between 13 and 16; the maximum of magnesia admitted is 4 per cent. This appears to admit of a very reasonable licence in composition.

As regards manufacture, though various processes have been tried, it is believed that all slag cements at the present time are prepared by allowing the molten slag to flow into a running stream of cold water, and the higher the temperature of the slag the better is the result. This sudden cooling granulates the slag, and also removes in solution a large quantity of the inevitable sulphur in the form of sulphide which these slags contain. This element is present chiefly as calcium (lime) sulphate and sulphide. The former in reasonable quantity is not objectionable, its action being merely to decrease the rate of setting; but the latter in the presence of moisture breaks up into slaked lime and sulphuretted hydrogen, and, since the former compound is formed with a great increase in bulk, it is a distinctly dangerous body to admit into any finished product. Cements which contain objectionable quantities of sulphides are said to give a fracture, having a greenish tint when briquettes are broken which have been kept under water, though no standard test based on this property appears to have been formulated. The granulated slag, which contains a very large proportion of entangled water, is dried and finely-ground, and then mixed with lime, the proportion of which to 100 parts of the slag varies from twenty-five to forty parts. Fat lime is generally used, and is as good as any other as far as the hydraulic possibilities of the slag are concerned; but, owing to the great shrinkage which fat lime undergoes on drying, a slightly hydraulic lime is preferable to obviate any risk of cracking of the cement mortar after use.

Slag cements are lighter in colour than Portland, and have a lower specific gravity, about 2·7 to 2·9. Though they never attain the strength of good Portland cement, the better brands are not much below this figure. It should be noted, however, that in compression—in which condition all cementing materials should really be judged—they are a good deal inferior to Portland. The ratio of tensile to compressive strength for Portland is about one to ten, but according to Eckel this ratio for slag cements is only about one to five.

BATHS, TREHARRIS.

The pit-head baths provided by the Ocean Coal Company, Ltd., for the workmen at the Deep Navigation Colliery, Treharris, were recently opened. The baths have accommodation for 700 men and boys. Mr. G. D. Jones prepared the plans and supervised the work. [We are always glad to hear of the provision of baths in connection with manufactories and works.—ED.]

PROPOSED NEW BUILDING AND OTHER WORKS.*

IN these lists care is taken to ensure th accuracy of the information given, but it ma occasionally happen that, owing to buildin owners taking the responsibility of commencin work before plans are finally approved by th local authorities, "proposed" works, at th time of publication, have been actually commenced. Abbreviations:—T.C. for Tow Council; U.D.C. for Urban District Council R.D.C. for Rural District Council; E.C. fo Education Committee; L.G.B. for Loca Government Board; B.G. for Board o Guardians; L.C.C. for London County Council B.C. for Borough Council; and P.C. for Paris Council.

Aberdeen.—At a recent meeting of the Plan Committee of the Aberdeen T.C. seven sets c plans at an estimated value of £13,700 were considered. Two of these were plans of dwelling houses, the remainder being plans of busines premises.

Bedford.—Plans approved by the T.C.:—Ope shed, Grammar School playing fields, fo Governors of the Harpur Trust; alterations Converter House, Queen's Engineering Works for Messrs. W. H. Allen, Son, & Co., Ltd. covered way, the Brewery, Lurke-street, fo Messrs. Newland & Nash; entrance to coffe bar, 33, Kempston-road, for Committee o Soldiers' Home; extension of offices and new car shed, St. Leonard's Saw Mills, for Messrs Astell Bros.; engine shed, Cauldwell-street, fo Mr. F. Ray; diversion of S.W. sewer, Queen' Engineering Works; alterations, 49 and 51 Hurst-grove, and new lavatories, Queen' Engineering Works.

Bolton.—The U.D.C. has decided to acquain the L.G.B. of the serious state of overcrowdin in the district, with the request that they woul allow the Council to proceed with the housin scheme at once.

Bournemouth.—The Buildings Committee ha approved the following plans:—Additions Cripples' Home, Burnaby-road, the Shaftesbur Society and Ragged School Union; additions "Charlton," Wimborne-road, Mr. J. Whireley conservatory, "Capri," Chessel-avenue, M G. H. Radley; alterations, Criterion Hotel, Ol Christchurch-road, Mr. C. H. Cartwright additions to basement premises, Christchurch road, Messrs. W. S. White & Co., Ltd. additions, "Woodstock," Priory-road, Dr. B. W Mankivell; alterations, 308, Holdenhurst-roa Home and Colonial Stores, Ltd.; motor hous Christchurch-road, Messrs. Butler & Co.; alterations, "Dalton," Hengist-road, Mrs. Pritchard

Braintree.—Plans for the erection of ten pai of cottages at Chapel-hill, by Mr. E. Valentin and a new power house, for the Crittall Manufacturing Company, have been passed by th U.D.C.

Cardiff.—Mr. Seager, a Bristol Channel shi owner, has given £2,500 for extensions to Cardi Hospital.

Clydebank.—Clydebank Dean of Guild Cou has passed plans for a new block of twent tenements for the accommodation of shipyar workers. The block will consist of 160 one-roo and kitchen and two-room and kitchen house and will be situated in Dumbarton-road, betwee the Public Library and the Caledonian Railwa bridge.

Denby.—The Denby and Cumberworth U.D. has approved plans for three dwelling-house being a conversion of farmhouse, etc., at Low Cumberworth, for Mr. Longley, and plans ar sections for alterations and additions and th substitution of a modern plant for sewa effluent treatment at the Lower Cumberwor sewage works.

Dorchester.—The T.C. has approved the following plans:—Mr. A. Hallett, for conversion No. 5, Westerhall, into maisonnettes; and th Wilton Estate, for redrainage of No. 7, Frederic place.

Dover.—Plans approved by the T.C.:—Mot garage, Messrs. Worsfold & Hayward, to be bui in Queen-street; plans from Lieut.-Command Spencer, Senior Officer of the R.N.A.S., of proposed Church Army hut to be built in Cast place.

Dundee.—The following plans and sections proposed new buildings, etc., in Dundee ha been lodged at the office of the City Engineer: Constitution-street, extension of works, f Messrs. W. G. Grant & Co., Ltd.; Inverar terrace, motor shed, for Mr. J. F. Munro.

Edinburgh.—At a recent sitting of Edinbur Dean of Guild Court plans were submitted the Incorporated Soldiers' and Sailors' He Society for converting premises at 18, Greensi lane and Marshall's-court into workshops f disabled soldiers and sailors.

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* See also our list of Competitions, Contracts, et on page 462.

ipswell (Yorks).—Sir Hugh Bell and Lady
have promised to provide and equip at an
y date a large hut for the Y.M.C.A. at
swell, near Richmond, Yorks.
grow.—A scheme has been issued provision-
by the Charity Commissioners in respect of
um of £2,400 left by the late Mr. Hebden
ght, of Ingrow, for the foundation of a
mit Hole (Keighley) Hebden Wright Alms-
se Trust.
ettering.—The R.D.C. has passed plans for a
house at Corby, for Messrs. Lloyd's Iron-
e Company, and a motor shed at Messrs.
& J. Wallis's flour mills, Burton Latimer.
ongniddry.—It was reported at a recent meet-
in Edinburgh of the Ladies' Committee of
Scottish Veterans' Garden City Association
t it is hoped that a beginning will be made
the erection of the buildings at Longniddry
y next month, the estimates for which will
accepted at the next meeting of the Associa-
.
owestoft.—At a recent meeting of the T.C.
Sea Defence Committee reported the consent
he Board of Trade to the construction of the
ynes which the Surveyor had reported as
essary.
acclesfield.—An appeal is being issued to the
lic of Macclesfield and district for the funds
ded to carry out a contemplated extension of
premises at the Mill-street Mission
hyl.—It is proposed to erect a soldiers' hall
Kinmel Camp, Rhyl.
omford.—The D.C. has approved a plan for
erection of a factory in Mawney-road, for
H. N. Brook.
uislip-Northwood.—The U.D.C. has approved
ns for a garage at Field End Lodge, East-
e, submitted by Mr. W. J. Page, for Mr.
J. Hall.
eaham.—The Seaham Harbour U.D.C. has
proved plans for new club premises in North-
race, on behalf of the Seaham and District
rkmen's Club.
outh Shields.—A L.G.B. inquiry has been
d in regard to applications by the South
elds Corporation and the South Shields
).C. for sanction to prepare town-planning
emes.
troud.—The U.D.C. has approved a plan pre-
ted by Messrs. P. Ford & Son, on behalf of
. George Osborne, for alterations and addi-
ns to a dwelling-house at Tower-hill, Stroud.
wanage.—The U.D.C. has approved a plan for
litions to Rutland Cottage Victoria-avenue,
omitted by Mr. Date. and plans for two
tages at Newton, for Mr. Burt.
Vednesbury.—The T.C. has approved a plan
the erection of mess-rooms and canteen at
rks adjacent to Rose-street, King's-hill.
Vest Hartlepool.—The T.C. has approved the
owing plans:—Royal Electric Theatre Com-
ny, alterations to gallery and operating-box,
itby-street: South Durham Steel and Iron
mpany, Ltd., temporary workshop in works,
insforth-terrace.
Veston-super-Mare.—The U.D.C. has approved
ns and sections presented by the surveyor in
erence to the proposed provision of an addi-
nal storage tank on the west side of the exist-
low service reservoir at Montpelier.
Volverhampton.—The Electricity Committee
pose to make large extensions. Application
l be made to the L.G.B. shortly for per-
ssion to borrow £34,240.
Voolwich.—The licensing justices have passed
ns for alterations to the Powerful public-
se, Chapel-street, Woolwich (Mr. George
mm, licensee).
Vorksop.—Messrs. Thomas Turner & Sons,
ne and sand merchants, of Kiveton Park and
rksop, have decided to establish a large glass
tle works at Worksop. Plans have been pre-
red, and will be presented to the Worksop
D.C. at an early date.

GENERAL BUILDING NEWS.

CHURCH, CURRY RIVEL.

The dedication service in connection with the
toration of the north chapel of St. Andrew's,
rry Rivel, took place recently. The parish
urch of St. Andrew is a fifteenth-century
ilding situated at the north end of the village
een, and is conspicuous from the Langport
d Sedgmoor sides. Attached to its south
le is a thirteenth-century chapel, containing
its north side a series of recessed fourteenth-
ntury tombs. The chapel measures in-
nally 30 ft. 9 in. by 18 ft. 8 in., and is built
local blue lias with Ham stone facings. The
apel is divided from the chancel by an arcade
two arches. A feature of the chapel is the
nb arcade which runs the whole length of
north side. Until recently the chapel was in
very neglected state. The floor-level had
en raised by 10 in. to 12 in., and hid entirely
bases of some beautiful monuments. A
reful restoration has been carried out by Mr.
igh Bond, F.R.I.B.A., the Diocesan Archi-
ct, the work being undertaken by Messrs.
Pittard & Son, Langport, while the masonry
ork has been carried out by the sexton,
. E. Pitman. The total cost is about £500.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9½	9½	9½	9½	9½	9	8	6½	6½	6½
Accrington	10	10	10	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	10	7	7	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5¼	6
Birkenhead	1/-	1/-	1/-	11	11	1/-	9½	8	8	8
Birmingham	11½	11½	11½	11½	10½	11¾	10¼	8½	8¼	8½
Bishop Auckland	9	9	9	9½	10‡	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9¼	6½	7½	7½
Blackpool	11	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10½	11	10½	10½	10	10†	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10¼	10½	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9½	9½	9½	10	9	9½	8¾	7	7	7
Bury	11	11	10½	9	10	10½	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8¾	8¾	8¾	9¾	—	9¾	9¼	6½*	6½*	6½*
Chester	9½	10	10	9¾	9¾	10¼	9½	6¼	7	6½
Chesterfield	9	9½	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10¼	11	11	10¼	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	10	10	9	9	9½	8	7	7	7½
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7½	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9½	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	9¼	7	7	7
Harrogate	9½	9½	9½	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10¾	10½	10½	10½	10	10	9	8½	8½	8½
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9½	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6¾	6¾	6¾
Leeds	10¾	10¾	10†	10½	10½	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10½	9	8	8	8½
Lincoln	9	9½	9½	9	8½	8½	8	6	5½	6½
Liverpool	1/-	1/-	1/-	11	11½	1/-	10½	8	8	8
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	9	9	9	8½	8½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	10	9½	8½	—	9½	9	7	7	7
Merthyr Tydfil	9½	9½	9½	9½	9½	9	8½	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9½	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	11	10	8½	8½	9
Oldham	11	11	11	10	9	10	9½	7½	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8½	6½*	6½*	6½*
Pontypridd	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Portsmouth	9½‡	9½‡	9½‡	9½‡	9½	8½‡	7½	7‡	7‡	7‡
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10½	10	9¼	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	10	10	10	10¼	8¾	10	9	6¾	6¾	6¾
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10†	9¾	9¾	9½	10¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	9¼	9¼	9½	—	8½	7	6¼	6¼	6¼
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	10½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	8	8	8	8	7½	7½	7½	6	6	6
Sunderland	11	11	10½	11	10‡	9½	9½	7½	7½	7½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	9	7	7	7
Walsall	10	9½	9½	9½	8½	10	8¼	7¼	7¼	7¼
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10½	10½	10	10¼	—	9½	8	7½	7½	7½
Wigan	10½	11	10	10	9½	10¼	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	10¼	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	8	6½	6½	6½
York	9¾	9¾	9½	9½	9½	9½	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 2s. 6d. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv.; Public Appointments, xvi.; Auction Sales, xviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

⁂ It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

June 24.—**Inverkeithny (Banff.).**—Alterations.—For the mason, carpenter, and slater work of alterations and repairs on part of Steading, Downies, Inverkeithny. Plans and specification with the tenant and with Mr. W. L. Duncan, architect, Turriff.

June 26.—**Ormskirk.**—Repairs, etc.—The Guardians of the Ormskirk Union invite tenders for repairs, etc., at the workhouse and industrial schools. Forms of tender of Mr. Alfred Dickinson, Clerk to the Guardians, Ormskirk.

June 26.—**West Riding.**—Painting, etc.—For the painting, colouring, etc., of Barnoldswick Gisburn-road and Silsden Aire-view Council Schools for the West Riding Education Department. Specifications, etc., of Mr. B. Thornton, Divisional Clerk, Education Offices, Skipton.

June 27.—**Isleworth.**—Painting.—The Guardians of Brentford Union invite tenders for certain internal and external painting at their buildings at Isleworth. Forms of estimate from Mr. F. E. Harmsworth, Clerk, Union Offices, Isleworth.

June 27.—**Troedyrhiw.**—Motor Garage, etc.—For erecting motor garage, also painting and polishing work at the Co-operative Stores, Troedyrhiw, for the Merthyr, Troedyrhiw, and District Co-operative Society, Ltd. Plan, etc., of Mr. T. Edmund Rees, M.S.A., architect, Merthyr Tydfil.

June 28.—**Bradford.**—Painting, etc.—For painting and french-polishing shop fronts at Kirkgate and Rawson-place Markets, for the Corporation. Form of tender, etc., of the City Architect, Town Hall, Bradford.

June 28.—**Edinburgh.**—Painting.—For painter work at George Heriot's School, Heriot-Watt College, and the Trust Offices. Specifications, etc., from Mr. John Anderson, Superintendent of Works, 20, York-place, Edinburgh.

June 28.—**Plymouth.**—Joinery.—For certain joinery and other work at their workhouse for the B.G. Specification of Mr. W. H. Davy, Clerk to the Guardians, The Workhouse, Greenbank-road, Plymouth.

June 28.—**Rochester.**—Slaughter Hall, etc.—For the erection of a slaughter hall, cooling room, lairage, and pens, etc., for Messrs. Payne & Co., which they propose to erect upon the Common, Rochester. Mr. Chas. W. Thompson, architect, A.R.I.B.A., P.A.S.I., Bank-chambers, Rochester.

June 29.—**Idle.**—Painting.—For painting, inside and out, of the P.M. Church and schools, Idle. Specifications, etc., of Mr. J. A. Munton, Baston, Idle, Bradford.

June 29.—**London.**—Decorative Works, etc.—The Kensington B.G. invites tenders for sundry decorative works and repairs at their infirmary, Marloes-road, Kensington. Specification, etc., of Mr. W. R. Stephens, Clerk to the Guardians, Guardians' Offices, Marloes-road, Kensington, W.

June 30.—**Headcorn.**—Bridge.—The Bridges and Roads Committee of the Kent C.C. invites tenders for the taking down and rebuilding of Frank's Bridge, Headcorn. Plans, etc., at the County Surveyor's Office, St. Peter-street, Maidstone. Deposit, £2 2s.

June 30.—**Skene.**—Mason Work, etc.—For mason, joiner, slater, and plaster work at Auchinclech Farm, Skene (Mr. Cassie, tenant). Plans, etc., at the Farm.

July 10.—**Cavan.**—Alterations, etc.—For extensive alterations and additions to the drapery premises in Main-street, Cavan, known as Messrs. James Fay's, for Mr. Peter Soden. Plans, etc., of Mr. P. J. Brady, architect, Broomfield, Ballyhaise.

July 10.—**Harwich.**—Refuse Destructor.—For the design and construction of a refuse destructor. Sketch plan of site and general conditions of Mr. F. Harold French, Borough Surveyor, Harwich. Deposit, £1 1s.

No Date.—**Bristol.**—Workmen's Dwellings, etc.—The Trustees of the Furber Fund invite tenders for erecting workmen's dwellings and laying sewers at Bryant's-hill, St. George. Quantities, etc., of Mr. W. H. Watkins, F.R.I.B.A., architect, 15, Clare-street, Bristol.

FURNITURE, MATERIALS, etc.

June 23.—**Hull.**—Lead, etc.—Supply to the Corporation, for six months, of lead, glass, and plumbers' goods. Forms of tender at the City Engineer's Office, Guildhall, Hull. Mr. F. W. Bricknell, City Engineer.

June 24.—**Selby.**—Paints, etc.—Supply to Selby Union of paints and oils, etc. Forms of tender from Mr. J. Townend, Clerk, Poor Law Offices, 1, Abbey-place, Selby.

June 26.—**Cambridge.**—Oils, Glass, etc.—Supply to the Cambridge County Lunatic Asylum, Fulbourn, near Cambridge, of oils, window glass, etc., for six calendar months. Form of tender of Mr. J. Kemp, Steward, at the Asylum.

June 26.—**Grimsby.**—Paints, etc.—Supply to the Guardians of paints and oils, etc. Forms of tender of Mr. J. F. Wintringham, Clerk to the Guardians, St. Mary's-chambers, Great Grimsby.

June 26.—**Ipswich.**—Painters' Sundries.—Supply to the Guardians of painters' sundries, etc. Forms of tender of Mr. L. W. Greenhalgh, Clerk to the Guardians, Guardians' Offices, 19, Tower-street, Ipswich.

June 26.—**Toxteth Park.**—Oils and Colours.—Supply to the Guardians of the Poor of the Township of Toxteth Park, for the Poor Law Institution, Smithdown-road, and Children's Homes, Church-road, Wavertree, of oils and colours, etc. Tender forms of Mr. R. Albert James, Clerk to the Guardians, 15, High Park-street, Liverpool.

June 29.—**Exeter.**—Materials.—Supply to the Devon County Lunatic Asylum of building materials, etc. Tender forms of Mr. Cecil Masters, Clerk, Exminster.

June 30.—**Powick.**—Paints and Oils, etc.—Supply to the Committee of Visitors of Worcester County and City Asylum, Powick, of paints and oils, etc. Forms of tender from the Storekeeper.

July 3.—**Rotherham.**—Paints, etc.—Supply to the Corporation of paints, etc. Forms of tender, etc., of the Engineer and Manager, Electricity Works, Rotherham.

ENGINEERING, IRON, AND STEEL.

June 27.—**London.**—Water Main Extension.—The Managers of the Poplar and Stepney Sick Asylum District invite tenders for proposed extension of hot-water main at the District Sick Asylum, Devons-road, Bow, E. Specifications, etc., of Mr. Sydney G. Wright, Clerk to the Managers, Devons-road, Bow, London, E.

June 30.—**Shanghai.**—Heating Plant.—The Shanghai Municipal Council invite tenders for the installation of a heating plant in the new central offices. Plans, etc., of the Council's agents, Messrs. John Pook & Co., 68, Fenchurch-street, London, E.C. Deposit, £10.

July 10.—**Shortlands.**—Boilers.—The Metropolitan Water Board invite tenders for the manufacture and erection of two Lancashire boilers, together with economiser, superheaters, piping, feed pump, and other contingent work, at the Shortlands Pumping Station, Valley-road, Shortlands, Kent. Forms of tender, etc., at the office of the Board, Savoy-court, Strand, London, W.C. (Engineer's Department). Deposit, £1 1s.

* No Date.—**Shanghai.**—Heating Plant.—The Shanghai Municipal Council invite tenders for installation of heating plant in the new central offices.

ROAD, SANITARY, AND WATER WORKS.

June 23.—**Manchester.**—Granite Macad
etc.—Supply to the Paving, Sewering, and Hi
ways Committee of the Manchester Corporat
of granite macadam, granite chippings,
tarred granite or slag macadam. Particulars
the Secretary, Paving, etc., Department, T
Hall, Manchester.

June 26.—**Farnborough.**—Limestone Macad
—Supply to the U.D.C. of about 500 tons of 2
broken limestone macadam (untarred).
J. E. Hargreaves, Surveyor, Town Hall, Fa
borough, Hants.

June 26.—**Hebburn.**—Tar Spraying.—For
spraying part of Victoria-road West and p
of Argyle-street for the U.D.C. Specificati
from Mr. H. Lee, Jun., Deputy Survey
Council Offices, Argyle-street, Hebburn.

June 27.—**London.**—Paving Blocks, et
The Tottenham U.D.C. invites tenders
(1) supply of wood paving blocks; (2) tar
asphalt paving repairs. Specifications, etc.,
the Acting Engineer, Town Hall, Tottenham.

June 30.—**Merthyr Tydfil.**—Macadam
Supply to the Corporation, for one year,
limestone macadam, gravel and chippi
granite or basalt macadam and chippings,
macadam and chippings. Specification,
from the Borough Surveyor, Town Hall, Mert
Tydfil.

July 3.—**Ealing.**—Stoneware Pipes, et
Supply to the T.C. of stoneware pipes,
Tender forms, etc., of Mr. J. Douglas Kni
A.M.Inst.C.E., M.I.M.E., M.I.E.E.,
Borough Electrical Engineer and Manager, E
tricity Supply Department, Town Hall, Eal
W.

Public Appointments.

* No Date.—Clerks of Works.—The
R.E. invites applications for the above p
Salary 7s. 6d. per day (seven days).

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TRADE NEWS.

The picture palace, Beverley, is being supp
with Shorland's special inlet ventilators
Messrs E. H. Shorland & Brother, Ltd.,
Failsworth, Manchester.

Under the direction of Mr. H. Fo
Licentiate R.I.B.A., Carlisle, Boyle's la
patent "air-pump" ventilators have
applied to the new Public Hall, Carlisle.

In the Smallpox Hospital at Ipswich
cavity walls were grouted with waterpro
cement, we are informed, and the
Medical Offices of Health at Ipswich
similarly built with Pudloed cement.

We have received from Messrs. S. W. Fra
& Co., Ltd., 64-70, Gray's Inn-road, W.C
neat little leaflet which they have just is
in place of their usual yearly catalogue.
contains illustrations and particulars,
veniently arranged, relating to rolling shu
of various types of which Messrs. Francis &
are the makers. They also manufacture
fronts in brass, gun or white metal; sp
roller sunblinds, collapsible steel gates,
fascias, gilt wood and metal letters, etc. Qu
tions will be submitted free of charge
requirements being communicated to the a
address.

[Those with an asterisk (*) are advertised in this issue.]

RICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which evail at the present time, prices of materials ould be confirmed by inquiry.]

Timber prices and glass have been revised since last ue.—ED.

* Our aim in this list is to give, as far as possible, the erage prices of materials, not necessarily the highest lowest. Quality and quantity obviously affect prices a fact which should be remembered by those who ke use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
st Stocks	2	0	0
cked Stocks for Facings	2	12	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
ettons	1	13	0	Best Blue Pressed Staffordshire	5	0	0
st Fareham Red	3	12	0	Do. Bullnose	5	5	0
st Red Pressed Ruabon Facing	5	5	0	Best Stourbridge Fire Bricks	4	15	0

AZED BRICKS—

	£	s.	d.		£	s.	d.
st White, Ivory, and Salt Glazed Stretchers	13	7	6	D'ble Str'tch'rs	18	17	6
eaders	12	17	6	Double Headers	15	17	6
oins, Bullnose and 4½ in. Flats	16	17	6	One Side and two Ends	19	17	6
				Two Sides and one End	20	17	6
				Splays and Squints	18	7	6

Second Quality £1 per 1,000 less than best.

	s.	d.	
ames Ballast	8	3	per yard, delivered.
ames and Pit Sand	8	6	,, ,, ,,
est Washed Sand	9	6	,, ,, ,,

Per ton, delivered.

	£	s.	d.		£	s.	d.
est Portland Cement	2	5	0	..	2	8	0

Do. £2 1s. alongside in 80-ton lots.
rrocrete 2s. 6d. per ton extra on above.
est Ground Blue Lias Lime .. 1 5 6 at rly. depôt.

OTE.—The cement or lime is exclusive of the ordinary charge for sacks.

rey Stone Lime .... 18s. 0d. per yard delivered.
ourbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
ATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1	7
o. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1	8¾
o. do. delivered on road waggons, at Nine Elms Depôt	1	9¼

ORTLAND STONE—

	s.	d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W.R., per ft. cube	2	5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½

White basebed, 2d. per ft. cube extra.

ANDOM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s.	d.		s.	d.
ncaster in blocks	2	0	Closeburn Red Freestone	2	2
eer in blocks	1	7½	Red and White Mansfield Random block	2	9
rinshill in blocks	2	4	Yellow Magnesian Limestone do. do.	3	3
arley Dale in blocks	2	5			

ORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
cappled random blocks	3	4
Per Ft. Super., Delivered at Railway Depôt.		
in. sawn two sides landings to sizes (under 40 ft. super.)	2	5
in. rubbed two sides, ditto	2	8
in. sawn two sides slabs (random sizes)	1	0½
in. to 2½ in. sawn one side slabs (random sizes)	0	8½
½ in. to 2 in. ditto, ditto	0	6¾

ARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
cappled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
in. sawn two sides landing to sizes (under 40 ft. super.)	2	3
in. rubbed two sides ditto	2	7
in. sawn two sides slabs (random sizes)	1	0
in. self-faced random flags	0	5

TILES.

Per 1,000 f.o.r. London.

	£	s.	d.
est machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2	12	6
rnamental ditto	2	15	0
ip and valley tiles (per dozen)	0	5	6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£	s.	d.
est Blue Bangor Slates, 20 by 10	11	16	0
irst quality ,, ,,	11	10	0
,, ,, 16 by 8	5	15	0
est Blue Portmadoc, 20 by 10	11	13	6
irst quality ,, ,,	11	3	6
,, ,, 16 by 8	5	15	0

WOOD.

EST BUILDING REDWOOD. Imported sizes. Nominal. Per standard.

	£ s. d.		£ s. d.
eals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	36 0 0	..	38 0 0
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	35 10 0	..	36 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

	£ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	33 0 0	..	34 0 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.	
¾ in.	1 0 0		
Seconds	1 0 0	less than best	
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 10 0 0	..	—

Stocks very limited.

	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	13 0 0	..	14 0 0
Do. 6 in. to 10 in.	11 0 0	..	12 0 0
	Per standard.		
Best Pitch Pine Deals	35 0 0	..	36 0 0
Under 2 in. thick	0 10 0	extra.	

JOINERS' WOOD.

	£ s. d.		£ s. d.
White Sea First Quality Red:			
4 in. by 11 in.	43 0 0	..	44 0 0
3 in. by 11 in., and 2 in. by 11 in.	42 0 0	..	43 0 0
4 in. by 9 in.	38 0 0	..	39 0 0
3 in. by 9 in., and 2½ in. by 9 in.	37 0 0	..	38 0 0
9 in. by 11 in. boards	1 0 0	more than deals.	
7 in. and 8 in. battens	34 0 0	..	35 0 0
7 in. and 8 in. boards	1 0 0	more than battens.	
Archangel White Deals—			
Best 3 in. by 9 in. and 10 in. and 11 in.	40 0 0	..	44 0 0
Seconds, do.	2 0 0	less than best.	
U.S. Battens	31 0 0	..	33 0 0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—	Per square actual.		
1¼ in. by 6½ in. planed and shot	2 2 0	..	2 3 0
1¼ in. by 6½ in. planed and matched	2 3 0	..	2 4 0
1 in. by 6½ in. planed and shot	1 10 0	..	1 13 0
1 in. by 6½ in. planed and matched	1 11 0	..	1 12 0
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1 6 0	..	1 8 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
Columbian or Oregon Pine, best quality	Per standard. 42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0	upwards.	
Oddments	39 0 0	,,	
Seconds, regular sizes	43 10 0	,,	
Oddments	37 10 0	,,	
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch.	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per ft. super, as inch	0 1 0	..	0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	26 0 0	..	30 0 0
Do. do. (Java)	24 0 0	..	26 0 0
American Whitewood planks, per ft. cube	0 8 6	..	0 9 0

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

WROUGHT-IRON TUBES AND FITTINGS—

Discounts off Association Prices.

	Tubes. Per Cent.		Fittings. Per Cent.
Gas at works	55	....	57½
Water ,,	50	....	55
Steam ,,	45	....	52
Galvanised gas at works	30	....	47½
,, water ,,	23¾	....	45
,, steam ,,	17½	....	42½

Ex London 2½ per cent. less than above.

L.C.C. SOIL PIPE— London Prices.

	Pipes Coated. s. d.		Bends. s. d.		Branches. s. d.
2 in.	2 4	....	1 8	....	2 0
2½ in.	2 9	....	1 10	....	2 6
3 in.	3 5½	....	2 0	....	3 0
3½ in.	3 9¾	....	2 6	....	3 6
4 in.	4 1½	....	2 10	....	4 0

RAIN-WATER PIPES, ETC.— London Prices.

	Pipe. s. d.		Bends. s. d.		Branches. s. d.
2 in.	1 8½	....	0 11	....	1 3
2½ in.	1 10½	....	1 1	....	1 6
3 in.	2 2¼	....	1 4	....	2 0
3½ in.	2 8¼	....	1 7	....	2 4
4 in.	2 10¾	....	1 11	....	2 10

METALS (*Continued*).

L.C.C. DRAIN PIPES— London Prices.
4 in., 4s. 1d. .. 5 in., 4s. 10d. .. 6 in., 5s. 11d.

	Per ton, in London. £ s. d.		£ s. d.
IRON—			
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0
Steel Bars, Ferro-Concrete quality, £18 basis price.			
Hoop Iron, basis price	20 0 0	..	20 10 0
,, ,, Galvanised	33 0 0	..	—
(* And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	20 10 0	..	21 0 0
,, ,, 24 g.	21 10 0	..	22 0 0
,, ,, 26 g.	22 10 0	..	23 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	33 0 0	..	—
,, ,, 22 g. and 24 g.	33 10 0	..	—
Ordinary sizes to 26 g.	36 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g.	23 15 0	..	—
Best Soft Steel Sheets, 26 g.	25 10 0	..	—
Cut Nails, 3 in. to 6 in.	24 0 0	..	25 0 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

		£ s. d.		
LEAD—Sheet, English, 4 lb. and up		40 10 0	..	—
Pipe in coils		41 0 0	..	—
Soil pipe		44 0 0	..	—
Compo pipe		44 0 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.

		£ s. d.		
COPPER—				
Strong Sheet	per lb.	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
Copper nails	,,	0 1 6	..	—
Copper wire	,,	0 1 8	..	—
BRASS—				
Strong Sheet	,,	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
TIN—English Ingots	,,	0 1 11	..	—
SOLDER—Plumbers'	,,	0 0 11	..	—
Tinmen's	,,	0 1 2	..	—
Blowpipe	,,	0 1 4	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5d.	26 oz. fourths	6¼d.
,, fourths	4½d.	32 oz. thirds	8¾d.
21 oz. thirds	6d.	,, fourths	7½d.
,, fourths	5½d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. thirds	7d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic Muffled, and Rolled Cathedral white	5d.
Ditto, tinted	6½d.
Rolled Sheet	4½d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	2
,, ,, ,, in barrels	,,	0	3	3
,, ,, ,, in drums	,,	0	3	6
Boiled ,, ,, in barrels	,,	0	3	5
,, ,, ,, in drums	,,	0	3	9
Turpentine in barrels	,,	0	3	8
,, in drums	,,	0	3	11
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		58	0	0
Red Lead, Dry	per ton	58	0	0
Best Linseed Oil Putty	per cwt.	0	12	0
Stockholm Tar	per barrel	4	5	0
Filocol	per cwt.	0	9	6

GENUINE WHITE LEAD PAINT—
"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots ...... per ton delivered 70 0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

LAW REPORT.

Official Referee's Court.

(Before Mr. Pollack.)

Spencer Santo v. H.M. Office of Works.

After ten and a half days' cross-examination by Sir Reginald Acland, the re-examination of Mr. Patten was postponed until after the vacation.

The witness was cross-examined as to the quality of the stone and the loss which the contractors alleged they had suffered from waste. He said that out of 113,000 ft. of stone, about 14,700 ft. was wasted owing to bad quality, in addition to the usual allowance customary in the trade, which was 15 per cent. He did not suggest that every stone cut out of the building or not allowed to be fixed had been charged for. Stones of inferior quality ought not to have been supplied. About 61,320 ft. of stone was left over when the work was finished, but it was not any of the good stone. It was taken to a yard in Battersea and was absolutely wasted. Some might still be there, but he could not say what became of it. It was sent there by the plaintiffs, but he had nothing to do with the removal. The great feature in obtaining stone was to secure good weather-resisting quality. According to the contract the builders were to be responsible for defective stone. The test for soundness was by tapping, but that was not an infallible test. A stone might be sound and true, but when it came to be worked a vent might appear, and a stone which developed a vent in working was the risk of the builder.

Sir R. Acland said that that disposed of the claim for bad stone supplied, because all the stones mentioned in the particulars had been worked.

Witness said that they did not have the opportunity of obtaining the proper stones, as they were not allowed to select them at Portland. They did not even see the stone until it arrived at the yard.

The re-examination was postponed.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted*.

HEBBURN.—For laying tar-macadam roadway, channelling, etc., in Tharsis-road, Hebburn, for the Urban District Council. Mr. H. Lee, Jun., Deputy Surveyor :—

E. Edgar	£90	0	0
C. S. Bunch, Newcastle*	65	7	6

[Surveyor's estimate, £68.]

LONDON.—For structural and decorative works, No. 22, Gloucester-street, Warwick-square, S.W. Messrs. Rogers, Chapman, & Thomas, surveyors, 50, Belgrave-road, S.W. :—

E. D. Hook	£197	0
Walker & Son	185	0
A. Etheridge	179	15
Beaton & Son	159	15
T. J. Godbold	154	10
F. Stevens*	151	18

LONDON.—For the cleansing of wards, etc., at the Infirmary, 230, High-street, Homerton, N.E., for the Guardians of Hackney Union :—

A. Hall & Co.	£694	10	0
E. W. Holland & Co.	641	0	0
J. Whitaker & Sons	621	19	4
J. Scott Fenn	547	18	0
A. H. Inns, 7, Devonshire-square, E.C.*	487	0	0

NEWBURY.—For the constructing and extending concrete walling in the Northfield-road and Stoney-lane, Thatcham, for the Newbury Rural District Council. Mr. W. Church, Surveyor, Newtown-road, Newbury :—

A. J. Cooke, Newbury*	£69	12

STANLEY (Durham).—For extending brick culvert at Hustle Down, Stanley, for the Stanley Urban District Council. Mr. A. Routledge, Surveyor, Stanley, S.O. :—

J. Wears & Sons	£250	12
E. Dyson	240	16
Fisk & Whitfield	172	17
P. Heel, Stanley*	171	18

WELLINGTON (Salop).—For alterations and building work to the main building, children's home, probationary wards, etc., at the Union premises, for the Guardians of Wellington (Salop) Union. Messrs. Fleeming, Hickman, & Fleeming, architects, Market-square, Wellington. Quantities by architects :—

H. Willcock & Co.	£1,145
Hayes & Co.	1,030
W. Roe	980
R. & J. Millington	975
T. Pace	945
J. Carver	933
J. Roper, Wellington*	930

WEYMOUTH.—For repairs to naval steps and pile pier, for the Town Council :—

J. Vallance	£123	8
A. E. Whettam*	102	0

WEYMOUTH.—For strengthening the stone steps on harbour side of pile pier, for the Town Council :—

A. E. Whettam	£119	0
J. Vallance*	92	10

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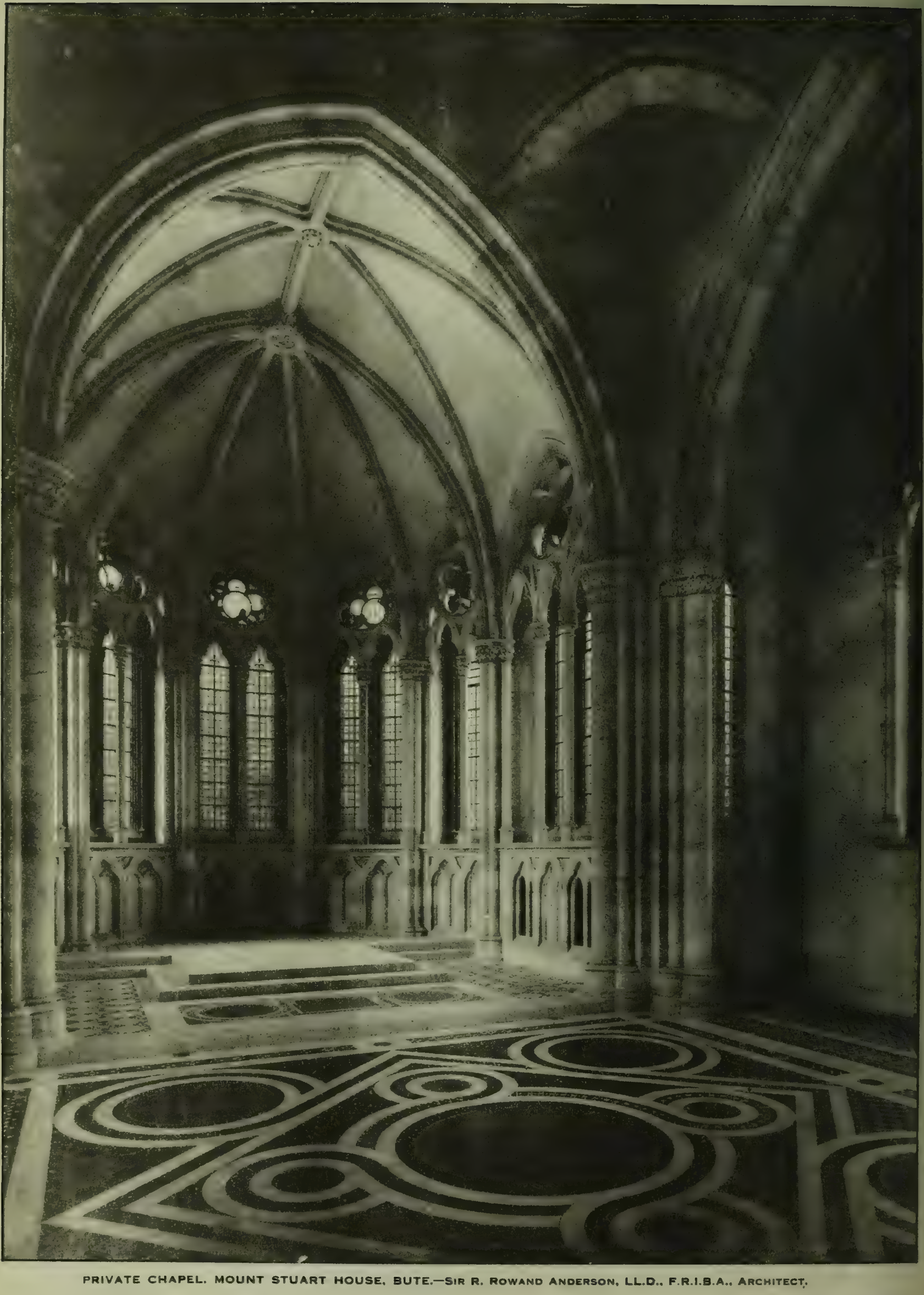
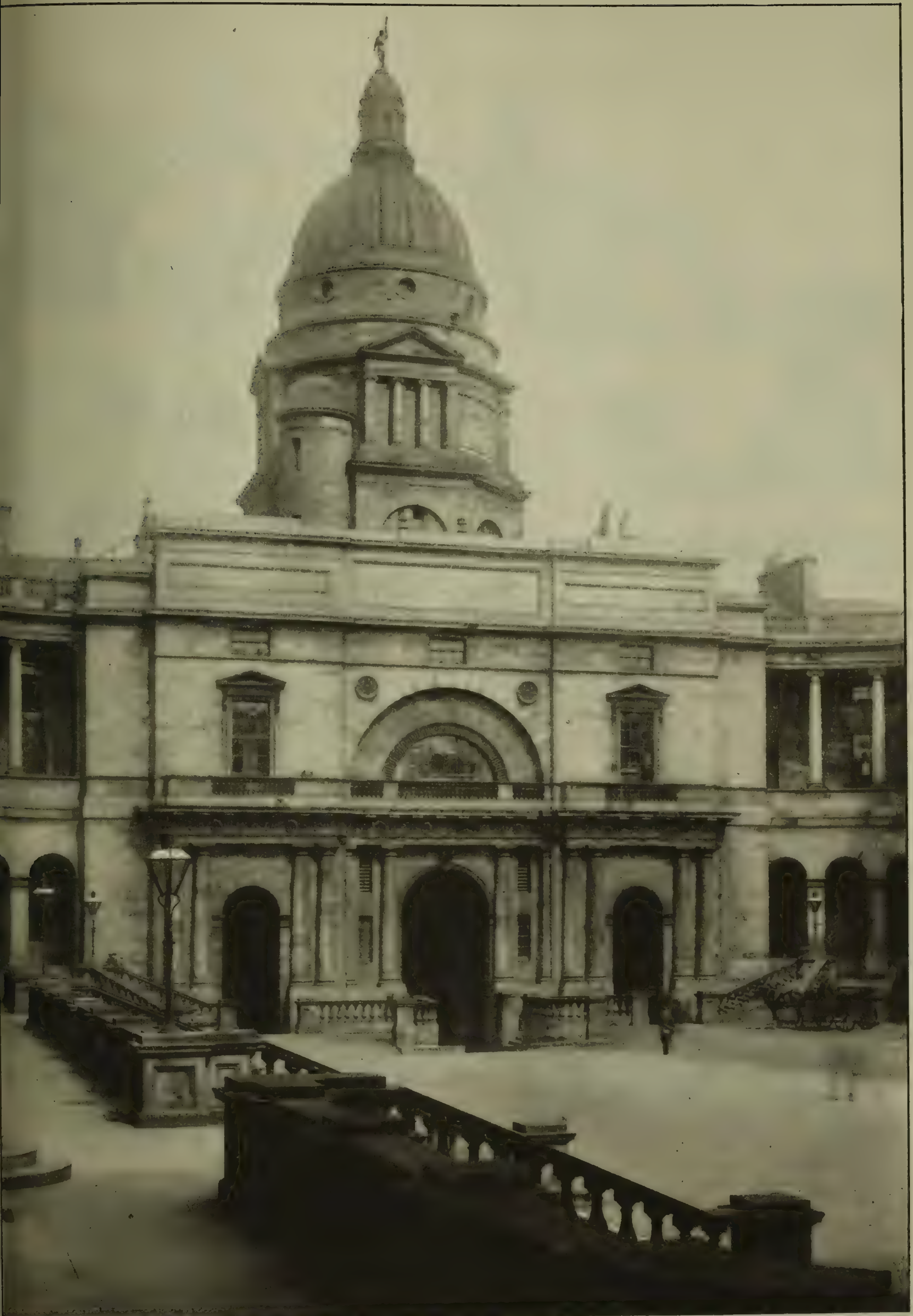
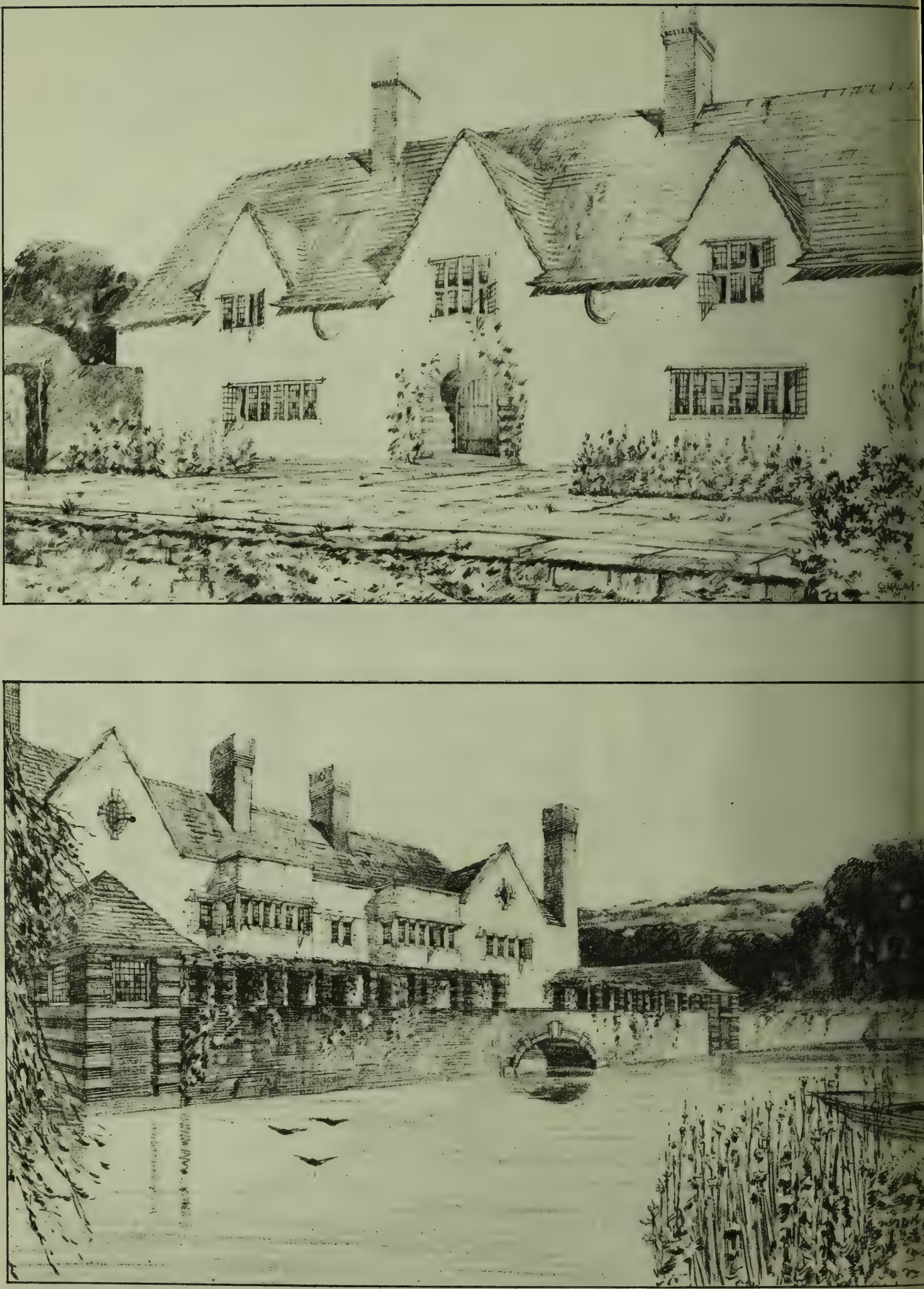


PRIVATE CHAPEL, MOUNT STUART HOUSE, BUTE.—SIR R. ROWAND ANDERSON, LL.D., F.R.I.B.A., ARCHITECT.

PHOTO: BEDFORD LEMERE & CO.



DINBURGH UNIVERSITY—OLD BUILDING: Dome over Entrance to Quadrangle.—Sir R. Rowand Anderson, LL.D., F.R.I.B.A., Architect.



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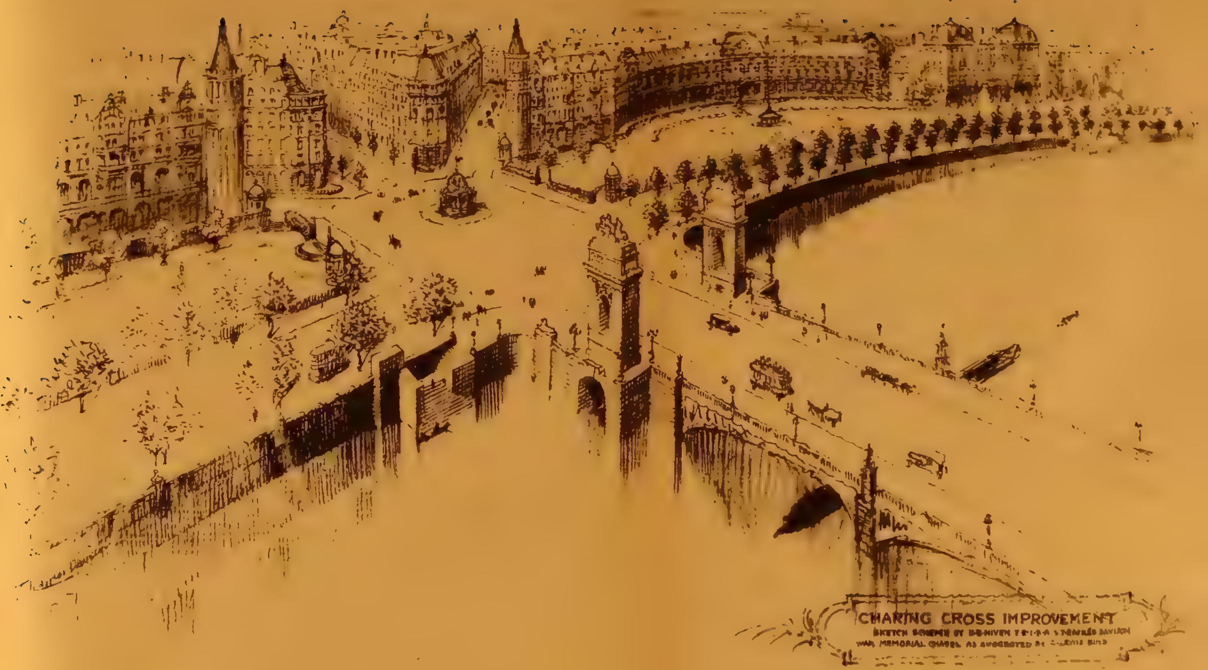
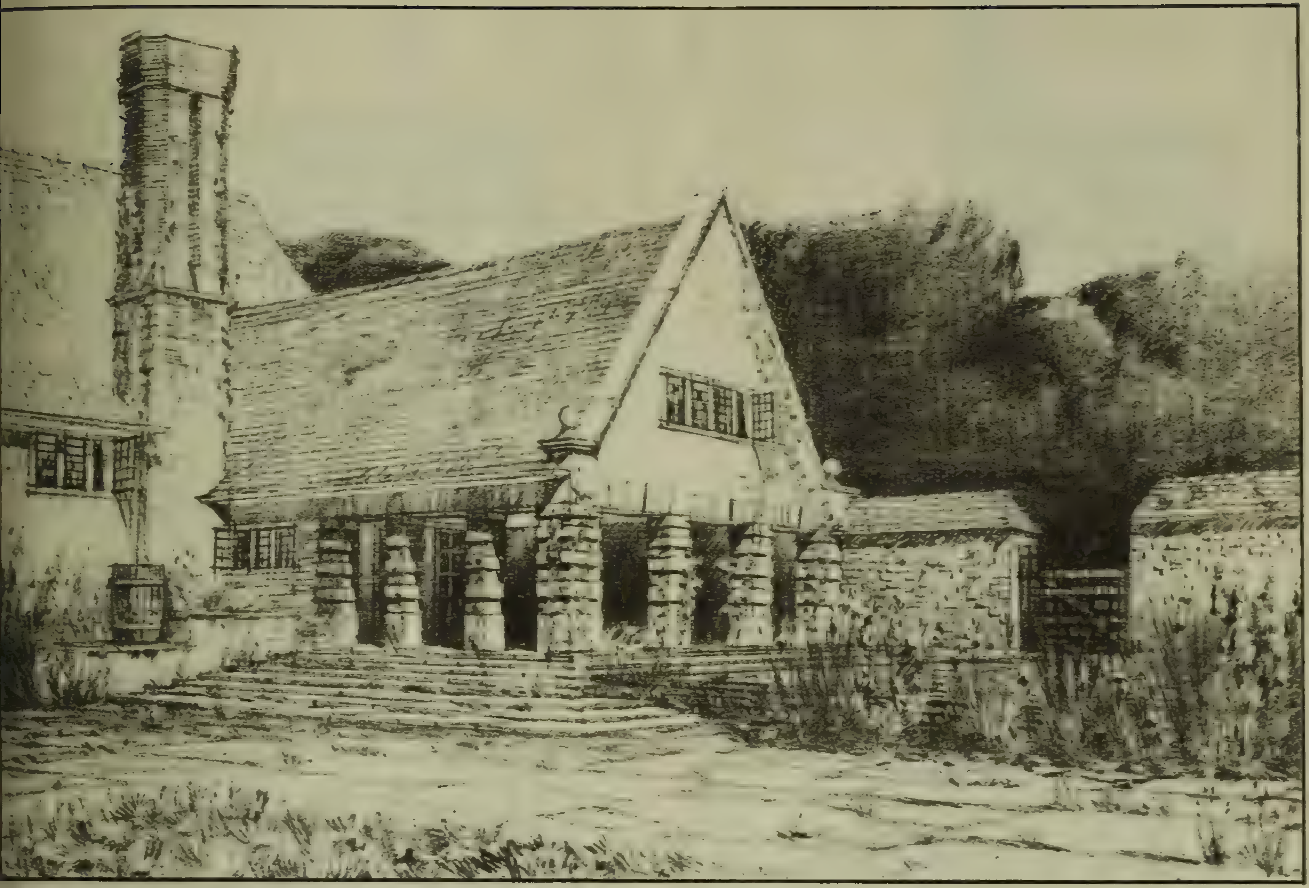
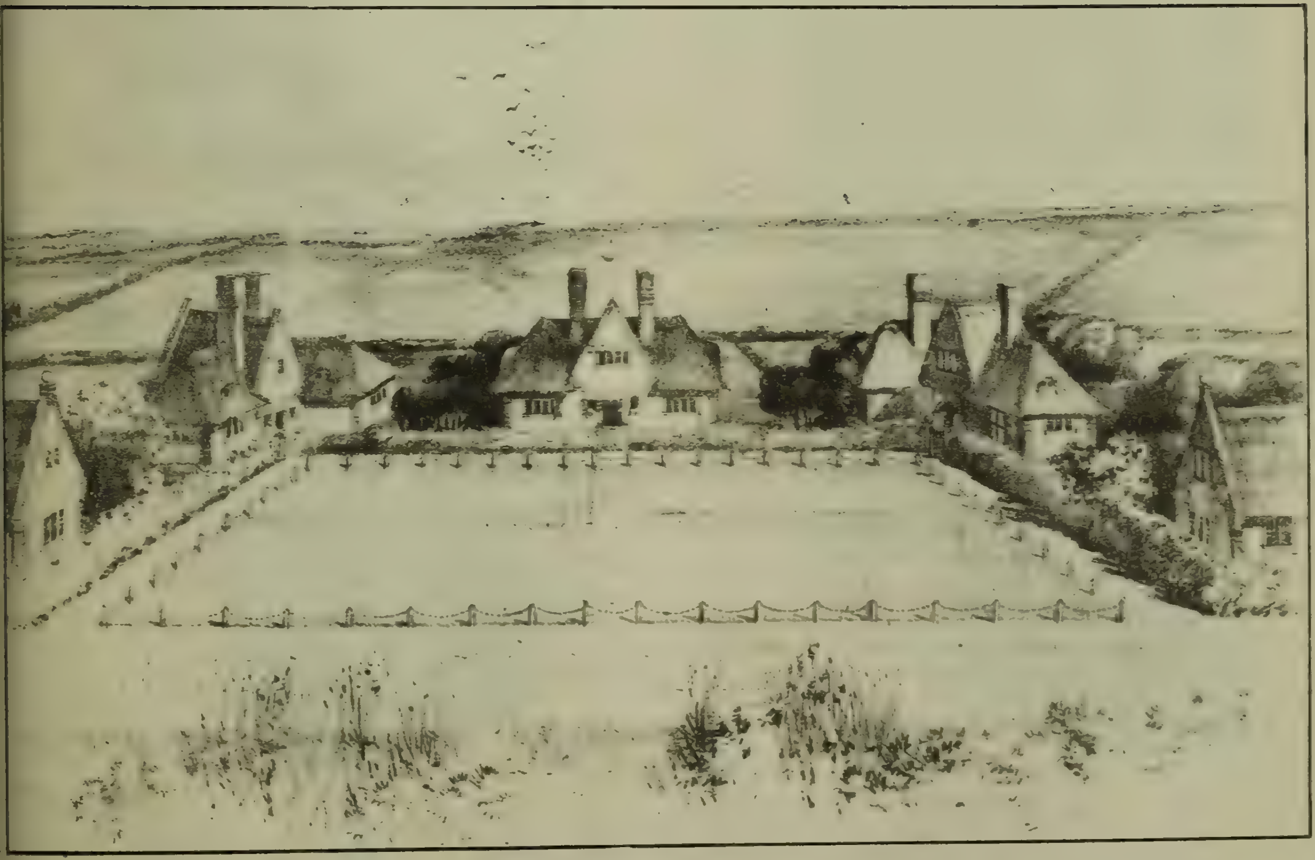


CHARING CROSS IMPROVEMENT

SKETCH SCHEME BY D. B. NIVEN F.R.I.B.A. & T. RAFFLES DAVISON

WAR MEMORIAL CHAPEL AS SUGGESTED BY C. LEWIS HIND





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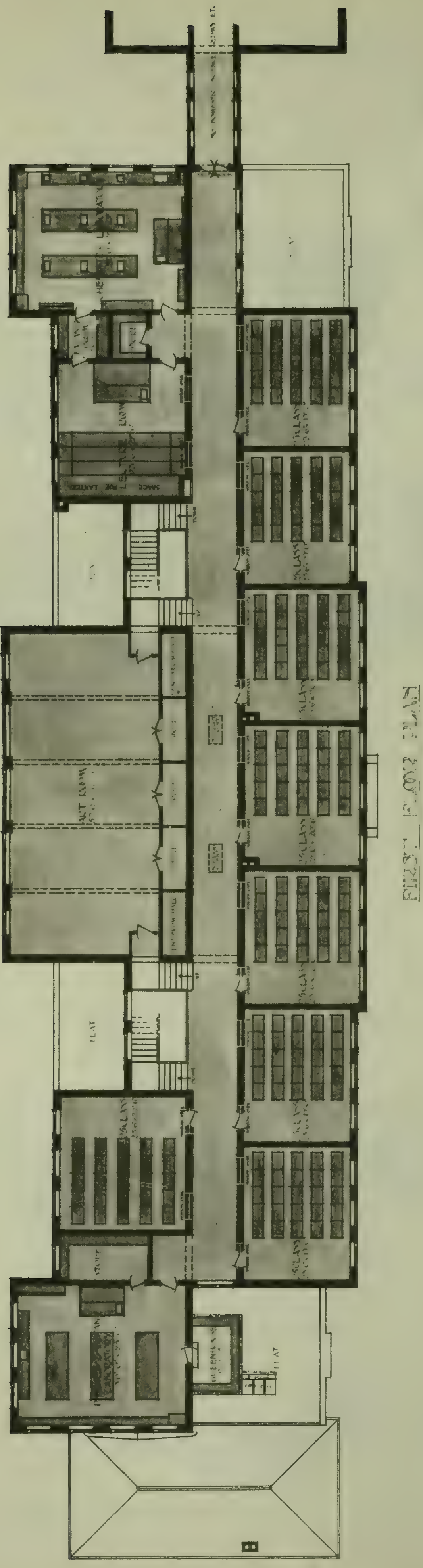
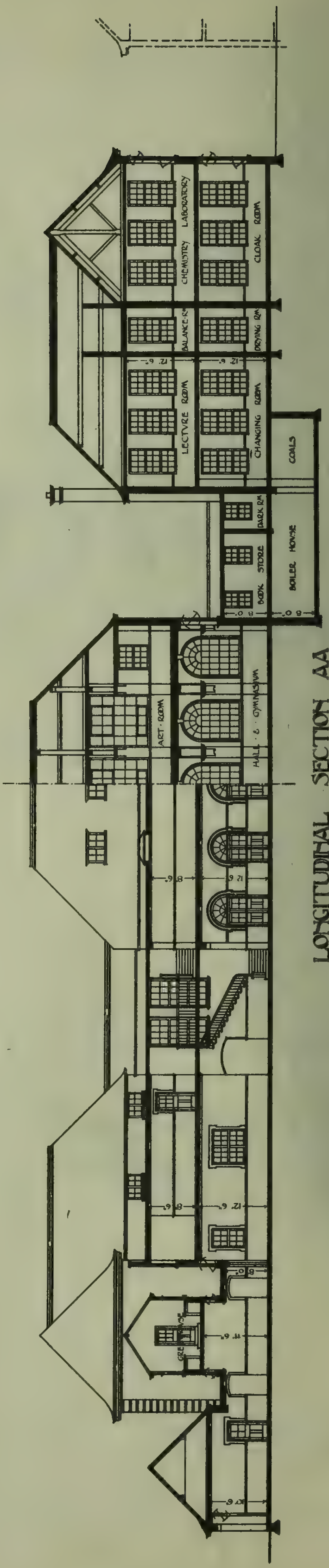
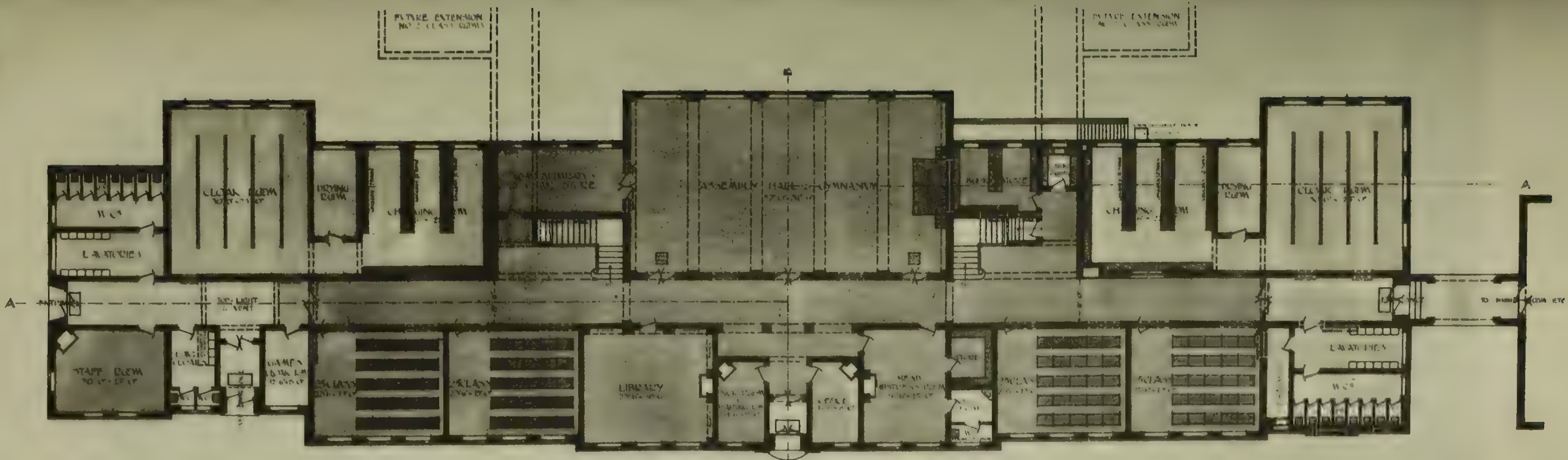
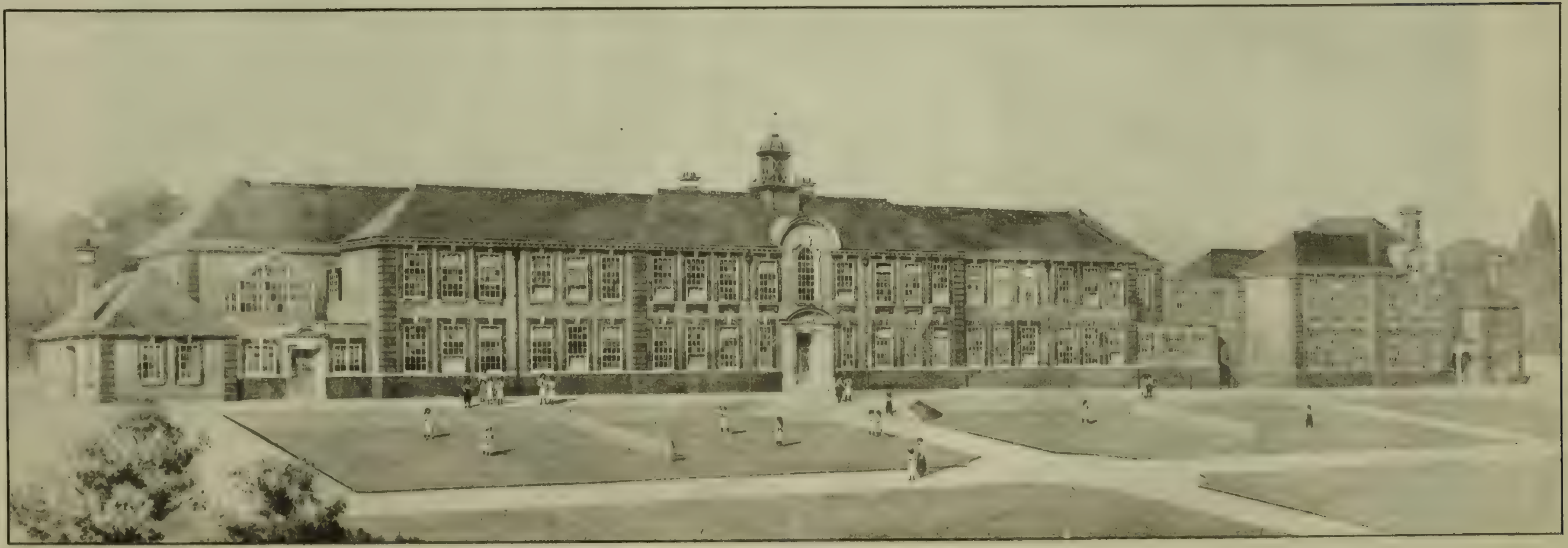




PROPOSED SECONDARY SCHOOL FOR GIRLS, LUTON.—FIRST PREMIATED DESIGN, BY MESSRS. J. R. BROWN & SON.



GROUND PLAN



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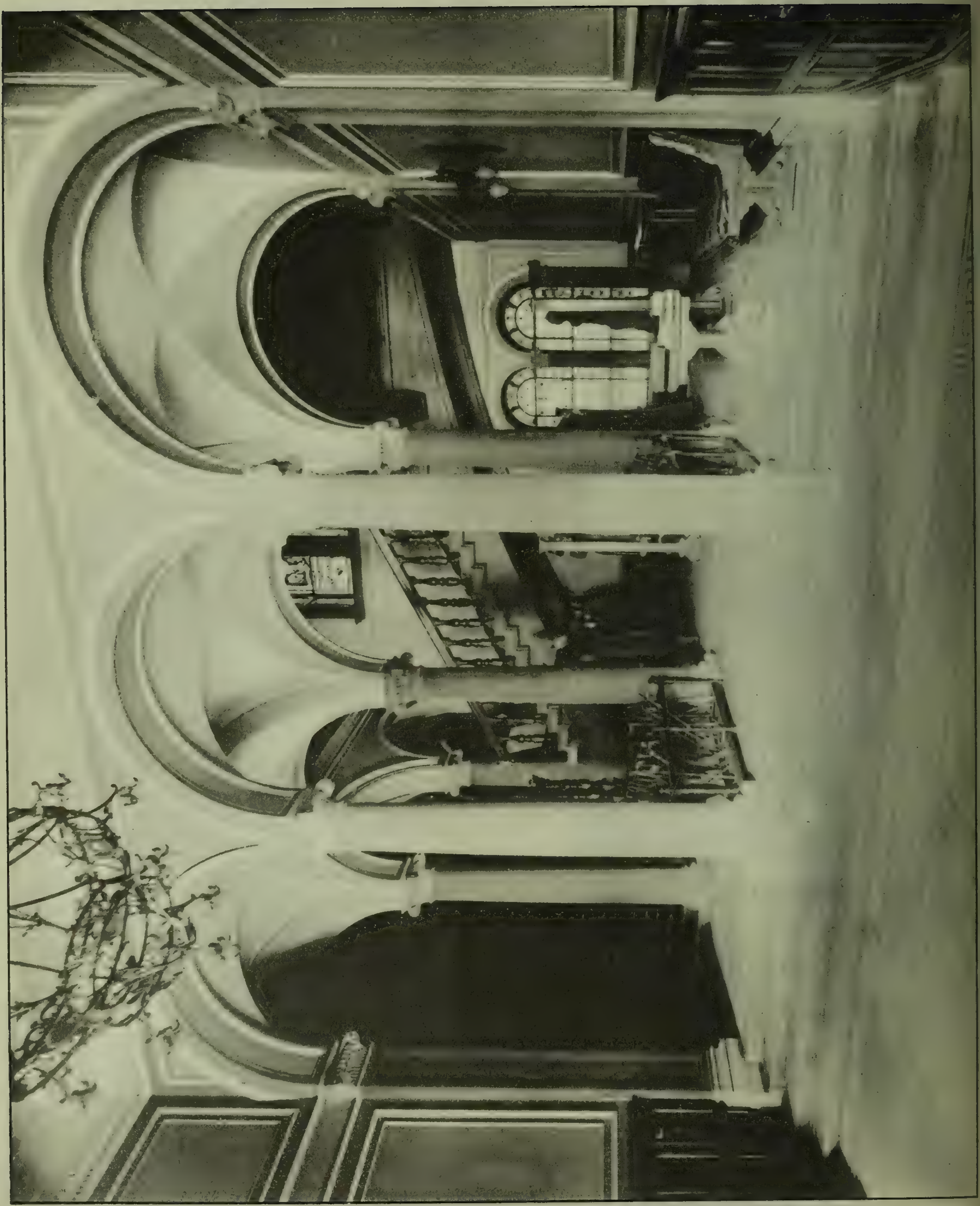


SCOTTISH CONSERVATIVE CLUB, EDINBURGH: ENTRANCE HALL.—SIR R. ROWAND ANDERSON, LL.D., F.R.I.B.A., ARCHITECT.

THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CX.—No. 3830. JUNE 30, 1916.

ARCHITECTS AND THE WAR.

SILENCE has been described as being golden and speech compared to a less valuable metal, but circumstances arise in which silver has an enhanced relative value. After the defeats on the Tugela in the South African War many journals told us "We must continue the struggle whatever the cost may be." Such statements are surely unnecessary, as no English Government could make peace because the struggle forced upon us proved more arduous and costly than had been anticipated. In like manner the Prime Minister's pledge that we should make no peace until Belgium had been compensated in full for the losses she had undergone was unnecessary to any who know the history and traditions of our race, and, though it is possibly well that such a statement should be made, because part of the electorate do not realise the facts and foreign Powers may have suspicions of our motives, most of us regret the necessity for such pronouncements.

Something like one-quarter of the whole number of architects in the country, comprising with very few exceptions all capable of active service, volunteered before any question of compulsion was mooted. But no profession or calling can in this respect be said to be pre-eminent, and England has found her sons as eager to serve their country as in any past age of her history.

We may say without danger of contradiction that the educated classes, excluding an insignificant number, have responded to the call of patriotism regardless of personal loss and hardship. If unanimity among the working classes has not been equally pronounced, it is due to want of a full realisation of conditions, not to want of patriotic instincts.

Architects, builders, and others connected with building have amply fulfilled their duty as citizens, but to express surprise or great gratification that they have done so would seem to be an insult to those we know and value; the wonder would have been had they behaved otherwise.

The men who have fallen have taken their place in the nation's roll of honour; while others who have distinguished themselves—and many have done so—have done honour not only to their calling, but to that great race to which all of us are proud to belong.

While we feel that notices in our pages of those who have rendered distinguished service or made the greatest sacrifice of all are a poor and inadequate acknowledgment, we shall welcome any note from friends with a view to recording their achievements in our pages, in which we shall gladly give any photographs which are sent to us.

Architects and others engaged in callings connected with building have been hit by the consequences of war to a greater degree than almost any class of the community. War has increased the immediate prosperity of many classes of the nation, it has made great demands of the profession of medicine, and produced unusual prosperity in the shipping trade. To architects it has in many cases meant temporary ruin and financial stress; nor have the Government adequately utilised the services of men whose knowledge would have enabled them to save millions on the nation's emergency building work.

Apart from the admirable work of the Professional Classes War Relief Council, the various architectural societies have organised work of their own which urgently required doing, and have by means of subscriptions and donations been able at one and the same time to help the victims of circumstances and to carry out work which required professional skill and knowledge of a high order which would not in ordinary times be available.

The Civic Survey and the Development Plan are instances of such work, and the example set in London is being followed in other large centres of population. It is not too much to say that through the action of those who are not able to bear arms, but have expended much time and effort in organising, work has been done which may be said to be essential for the right solution of the problems which we must deal with when peace returns. We intend in subsequent articles to give a specific account of the scope and character of the work which is being done.

Others again are giving work, time, and energy to the movement for improving the arts of design as applied to commercial uses. They are thus helping in building up the sinews of commerce, for it is in the design of the objects of common everyday use that we are deficient—a deficiency marked by the extent to which our markets have been successfully exploited by our trade rivals in the past.

Besides the Civic Arts Association, the various town-planning organisations and societies are doing much useful work, the result of which will be apparent when normal conditions are restored.

In every direction we investigate we find that architects who are at home, no less than those who are in our armed forces, are "doing their bit" and carrying out work of value and importance to the community.

We feel that a technical journal can do little, but if our readers can indicate how we can make the *Builder* of greater use to those who are serving their country at home and abroad we shall be glad to assist to the utmost of our power.

We whose field of activities covers the arts of peace cannot fittingly chronicle the deeds of war except in so far as they affect architecture and the arts. It may be felt by some to be a relief to find no war news in our columns, and, while war is happily a temporary and abnormal condition, the arts of peace are a necessity for mankind, and will be even more of a necessity in the future than at present.

We all know that "business as usual" is a misleading phrase when nothing can be as usual, but we have considered that a technical journal should chronicle as far as possible the attempt of those who remain by force of circumstances spectators and not actors in the great drama now being played to carry on their occupations and pursue their aims as usual.

We cannot name a date when war will give place to peace, but we know that date will come, and that the deeds wrought by our people will form an imperishable page in the records of our race, and will have secured for future generations an ideal to live up to and a charter of freedom for the suffering nationalities of Europe.

The men whose deeds will bring about this result are not among those who care for or need the laudations of the Press or are encouraged by the hysteria of easily-moved audiences, but those who would rather act than talk, and who are following in this in the footsteps of those who have built up our history in the past. Drake insisted on finishing his game of bowls when he was told the Armada was sighted, Wolfe would have preferred to have written Gray's "Elegy" than to have conquered Quebec, and we know our people to-day are what they were in the emergencies of our past history.

NOTES.

Dublin Town Planning Award.

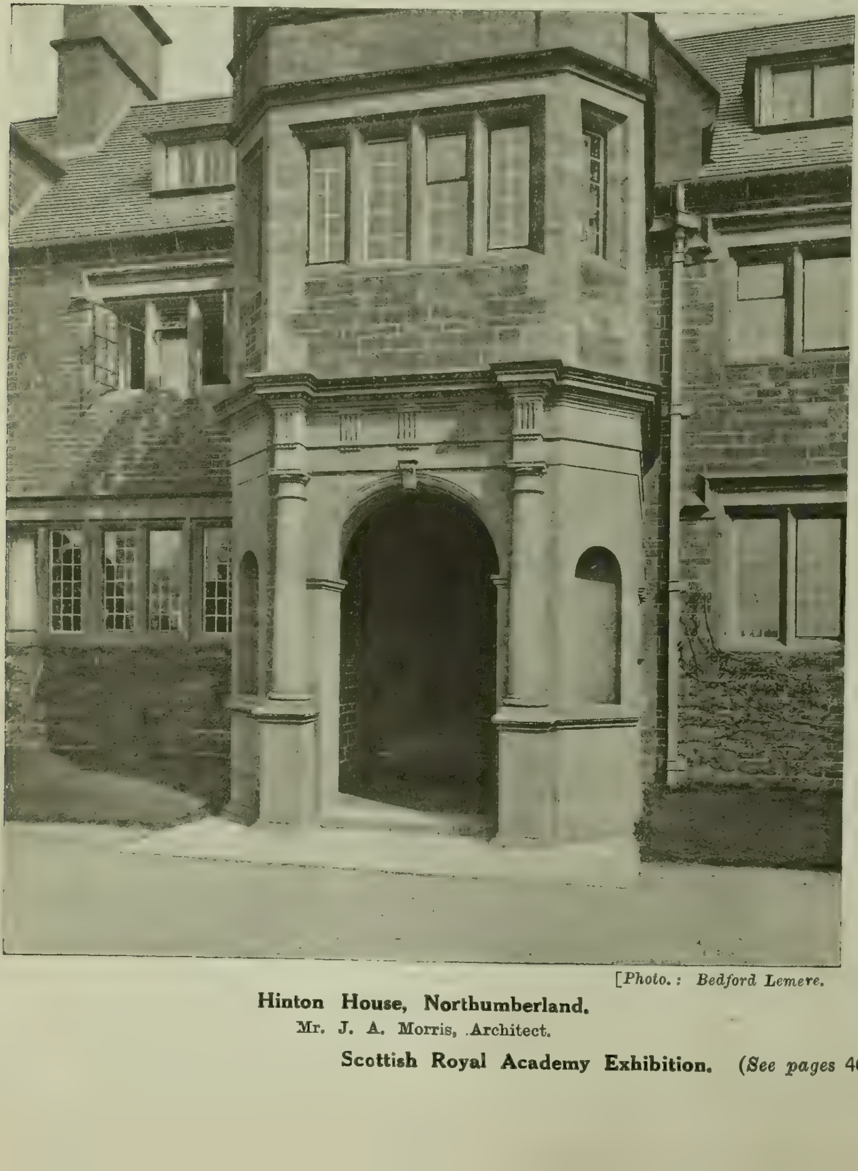
We have a communication from the Royal Institute of Architects of Ireland with reference to the repeated delays which have taken place in connection with the competition for a Town-Planning Scheme for Dublin. Lord Aberdeen, as our readers will remember, gave £500 for this purpose, and the assessors selected were the City Architect and two American architects. The story is one of delays. The time of sending in was postponed till April, 1915, in consequence of the war, the competitors, after much delay, receiving a printed notice stating that May 1, 1915, was the closing date for receipt of designs. On June 10, in reply to a letter from the Hon. Secretary of the R.I.A.I., it was stated that two of the three assessors were not available and that the third would not act without his colleagues. The Hon. Secretary thereupon sent Lord Aberdeen a letter enclosing a resolution passed by the Council of the R.I.A.I. to the effect that Lord Aberdeen should appoint others who would adjudicate. The Council was informed that Mr. William A. McConnal, Assistant Hon. Secretary of the Civics Institute of Ireland, would assess, and the R.I.A.I. are now informed that the adjudicators commenced their work on Saturday, June 17. We trust the award will commend itself to all since the conduct of the matter would appear to have been deliberate rather than hurried.

Charing Cross Bridge.

Much space is given in the *Observer* to further letters protesting against the South-Eastern Railway Company's action, the protests including a letter from Mr. Lutyens. The most interesting contribution is an account of the interview accorded to a representative of the *Observer* by Sir Francis Dent. The company's motives have, we learn, been misunderstood, and they are anxious to effect improvements, a statement which is pleasing, if surprising in the face of what they have left undone in the past. We should gather from the letter that it would take something like fifty years to get the improvement carried out and that the company in the meantime are considering the convenience of the public with tender solicitude. We are told Vauxhall Bridge took eight years to build, but Sir Francis Dent knows perfectly well that the statistics of the past are no criterion in dealing with the problems of to-day. While he was about it he might as reasonably quote figures relating to Old London Bridge We can imagine, if the question of building a cathedral at Liverpoo were under discussion, someone urging that, though Liverpool needed a cathedral, as judging from past experience it would take between 300 and 500 years to complete one, and therefore the question might be adjourned *sine die*, since it had no bearing on practical politics. We undertake to say that there is no reason why the whole improvement should not be completed within four years after the termination of war if the problem is taken in hand at once, and that for the time being no one will be surprised at suffering inconveniences when travelling on the South-Eastern Railway Company's system. They always have suffered in the past, and might be disturbed if it were found that convenience was considered now!

The Value of a Name.

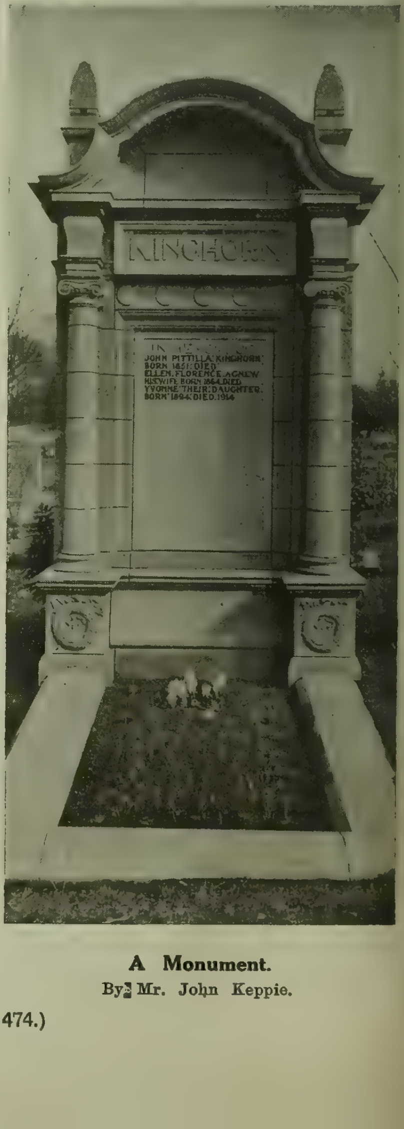
Mr. W. D. Caröe suggests in a letter to the *Times* that the bridge we all hope to see built at Charing Cross should be called "Kitchener Bridge." In the first place, we trust that the present struggle may be determined by a battle which may be as immortal and decisive as Waterloo and not by a gigantic period of attrition comparable in kind, though not in magnitude, with the final stages of the South African War. If a colossal battle in the West decides the fate of Europe the name given to it will transcend that of the most illustrious of leaders or of men and would be more fitting to commemorate all that the war stands for. But can we reasonably abandon the epithet Charing Cross, the only memory which connects London with the story of a great English king's devotion to his wife, and will the new bridge be less of a memorial to those who have fallen in the war if it is connected with one of the most picturesque incidents in our past history? We question whether Mr. Hind's suggestion of a memorial chapel in the centre of a busy thoroughfare is a wise one; but, if the idea finds favour, why should not a new and greater Charing Cross at one and the same time commemorate an incident in past history and the present war? A chapel would take up much space, a great memorial cross flanked by sculptured groups and memorials would take up comparatively little. If a memorial chapel is erected we hope that it may take the form of a structure at Westminster in close connection with and proximity to the Abbey.



[*Photo.*: *Bedford Lemere.*

Hinton House, Northumberland.

Mr. J. A. Morris, Architect.



A Monument.

By Mr. John Keppie.

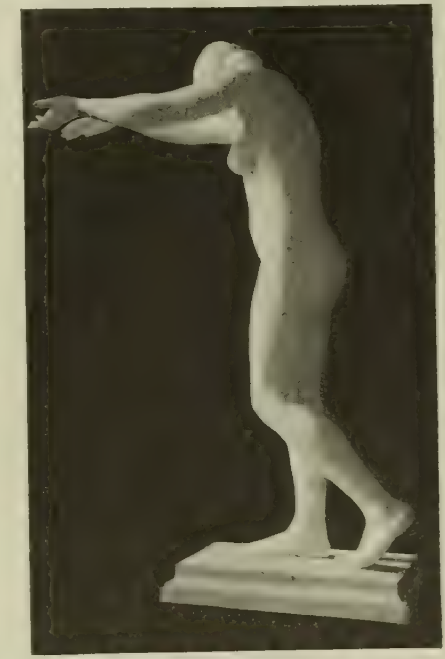
Scottish Royal Academy Exhibition. (*See pages* 468 *and* 474.)

SCULPTURE AT THE ROYAL SCOTTISH ACADEMY.

The Academy recently had an exhibition of foreign sculpture, and again it has a specialised collection, this time the works of Scottish sculptors of the late eighteenth and nineteenth centuries—lean years when the patronage accorded provincial men was meagre, so that even where their work remains the knowledge we have of the artists is slight. In the catalogue are over twenty short biographical notices, together with a well-written critique from the pen of Dr. Pittendrigh Macgillivray, to whom largely is due the credit of bringing together the present collection.

The representation of busts is fairly adequate, though its limitations are obvious and admitted, small pieces only being available when larger ones would more worthily have displayed the artists' power. This reason one can appreciate; but might not photographs have been had of groups and the like? Supplementary indeed, not only to this but to every exhibition of sculpture, that method of representation may be commended. Two or three well-chosen views may not inadequately prove a substitute for an actual statue as for a piece of architecture; even were the actuality transportable it would still be advantageous with it to have a view of its location, especially if it entered into the composition of a building. As a case in point, among the general exhibits are small-scale sketch groups—"Science and Agriculture" (93, 94), by Mr. Birnie Rhind—that, unless intended to be isolated and self-sufficient in themselves, would have their merits more judiciously appraised if accompanying them were illustrations of at least the part of the building they are to decorate—if for nothing else to guide in the placing of the model, whether purposed at or above eye level. In all exhibitions are some pieces that would be the better of this explanatory illustration.

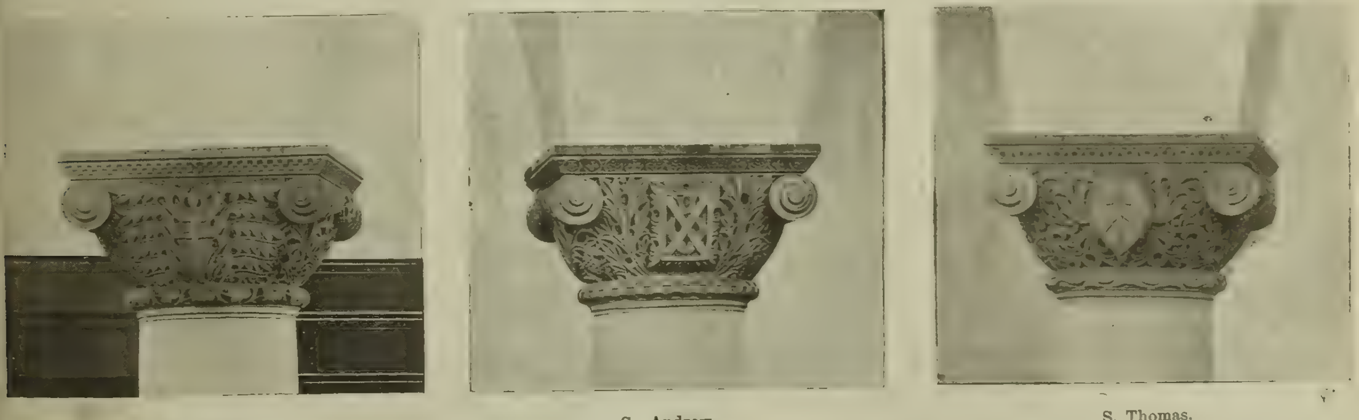
There are about forty marble busts, of Scottish worthies chiefly, many of them famous, and the ordinary visitor is divided between interest in the persons portrayed and the artistic worth of the sculpture. Viewed simply as models, some must have been a joy to the artist: such heads as Christopher North, Hugh Miller, Dr. Chalmers, and John Henning are inspirations. With strongly-marked features that might easily be exaggerated, one has a measure of assurance in their truthfulness, noting the exactitude of finish given, the treatment then admired in distinction to the sketchy suggestiveness nowadays preferred. A recent bust of Lord Kelvin (53), by Mr. A. McF. Shannan, and it no extreme of modernity, illustrates the difference in method. The hair in these older portraits, one suspects, is conventionalised; locks and beards were hardly so clustered and ropy, yet, after all, that arbitrary treatment is perhaps as successful and as true as the blocked-out manner general now. Hamlet, Portia, and Rosalind are imaginative essays; and besides these are over twenty miniature medallions of heads by the celebrated Tassie (1735-99) and others; these are modelled on the full half-round, and so avoid the difficulties of low relief. Larger pieces are "Grief" (46), in plaster, by Mr. Jas. Fillans, not very sensitively modelled; "Two Children with Hound" (34), in marble, by Mr. Patric Park, where the over-precise definition of the eyes hardly conveys the child character—both were artists of the early part of last century; "The Bard" (30), a terra-cotta group, rather too dispersed, by Mr. Geo. A. Lawson; "Echo" (74), a three-quarter size nude figure, by Mr. D. W. Stevenson, with fluttering scarf and graceful pose if idealised form, proper enough in the expression of a thought: "Hebe" (62), a severely classical study, by Mr. W. Calder Marshall; and the "Murmer of the Shore" (67), a semi-draped female in plaster, by Mr. Chas. McBride. Burns is a perennial exercise for Scottish sculptors—(75) and (80) are standing figures, by Mr. Wm. Mossman and Mr. John Rhind respectively. The former is the more sentimental, as a poet may be imagined to look like: the other discards the plaid and accessories that proclaims the ploughman, and elects to show him in the graceful dress of his period, but with pen and notebook, to denote the man of letters. An adjoining figure of a wearied "Thresher" (63), by Mr. Kellock Brown, if given the features preserved by contemporary portraits, might serve equally for Robert Burns. Best of all is a half-size marble figure of an "Athenian Youth" (95), by Mr. John Rhind, beautifully modelled and most carefully finished.



"1914."

Mr. Percy Portsmouth, A.R.S.A., R.B.S., Sculptor.

Of present-day artists' works (77), in dull bronze, a nude standing figure of a woman stunned and groping, with outstretched arms, one hand seeming to deprecate attack, the other inviting succour, is how the year 1914 is personified by Mr. Percy Portsmouth; "Eve" (82), a marble statuette, by Mr. Allan G. Wyon, may be compared with "Grief" (46)—the titles are interchangeable. This is the more muscular form, but treated with that purposed indefiniteness of finish that is a modern note, for in marble, as here, it is an intentional effect, something not incidental to plastic modelling, and in effect quite legitimate, but, like the slur in music, to be sparingly used. (No. 81) is a charming boy's head in marble, by Mr. David A. Francis; it may also be compared with the two children (34), and to the advantage of the modern; (73 and 71), by Miss Christine Gregory, small bronzes of a girl lying in unstudied attitude and a child, both admirable; (89 and 88), by Miss Florence A. Kendrick, are delightful—bronzes of a "Laughing Peasant" (a head) and "Puck." Of works of the late Associate, Mr. A. McF. Shannan, there are two examples, bronzes, besides that one noticed (72), the "Hunter and the Wood Nymph"—the two heads rather conglomerate; and (97) the "Music of the Marshes," taking its title from the frogs that attend a maiden nicely posed with a long bullrush that gives a fine line—both pleasing compositions. The biggest exhibit of all is in one of the picture-galleries, "Les Tigres" (96), by M. le Comte Jacques de Lalaing, honorary member, a tremendous thing in bronze, two animals, more than life-size, face each other over their prey: realistically modelled but withal composed so that there is a practical symmetry even with contrast. Dr. Macgillivray's contribution is modest (85), "Petrarcha," a portrait medallion from the only extant drawing; (86) the "Purple Iris," a female half-figure among the reeds; and (87) "Fantasy," rather incomprehensible, and why in bronze, perpetuating the few suggestive touches of a clay model?



S. Philip. S. Andrew. S. Thomas.

Capitals: Dalziel United Free Church, Motherwell. (*See page* 469.)

Mr. H. F. Kerr, A.R.I.B.A., Architect.

ILLUSTRATIONS.

Interior of St. Giles' Cathedral, Edinburgh.

THE picture is drawn from the Preston aisle, looking across the nave to St. Eloi's Chapel. In the foreground are the graceful fourteenth-century pillars, with their rich bases and capitals, and beyond the massive octagonal Norman piers (bearing the marks of fire and violence) support the dark masses of the heavy vaulting. Two stained-glass windows (by Cottier) to the left of St. Eloi's Chapel form the distant point of interest, whilst the sombre-coloured banners of the Highland regiments, suspended from the arches, add to the colour effect and romance of the picture.

STEWART CARMICHAEL.

West End of Bishop's Hostel, Lincoln.

OUR illustration shows a characteristic example of Mr. Temple Moore's work exhibited in the Scottish Academy Exhibition.

Ewelme Down, Near Wallingford.

THIS house is built of a rough grey stone from Marcham, with the dressings of Doulting stone. The walls are hollow and lined with brick, and the roof is composed of grey stone slates. The house is built on a very exposed spur of the Chiltern Hills overlooking Wallingford, and the doorstep is 700 ft. above sea-level. The views in all directions are magnificent.

The general contractors were Messrs. Simpson & Sons, Paddington-street, W. The metal casements were by Messrs. Geo. Wragge, Ltd., London and Manchester; and the consulting engineer was Mr. E. Wingfield Bowles, Victoria-street, S.W. The architect was Mr. Walter Cave, Sackville-street, London, W.

Our illustration is from a photograph kindly lent to us by *Country Life*.

The New Royal (Dick) Veterinary College, Edinburgh.

THE main buildings of this College are devoted to teaching and administration, and comprise separate departments for anatomy, chemistry, physiology, pathology, biology, materia medica, medicine, and obstetrics. They are entirely separate from the buildings forming the Clinical Department, and are so arranged on the ground as to allow of a large open courtyard in connection with the latter and a quadrangle to the former, which will be tastefully laid out with lawns, shrubbery, and flowers. The front is three stories in height, with the central part rising to four stories and forming the principal architectural feature in the elevation. The south wing is two stories high and the north wing three.

In connection with the various departments there are provided seventeen laboratories and five lecture theatres, with appropriate preparation-rooms adjoining, large dissecting-room to accommodate sixty-two students, hall for special functions seated for 300 persons, with ante-room, board-room, principals' room, and space for the Secretary's Department, and public waiting-room, etc., and professors' private rooms. Extensive laboratory accommodation has been provided for research into animal diseases, the aim of the authorities being that the institution should not only train students, but should also extend knowledge of the cause and prevention of disease. Excellent lavatory accommodation is provided throughout the buildings and abundance of storage; provision has also been made for laboratory and other extensions should such be required There is also a large general museum and several departmental museums.

In the Clinical Department, at rear of main buildings, and the front elevation of which forms the fourth side of the "quad," provision is designed for the treatment of all kinds of animals, there being accommodation for horses, cows, and a couple of sheep pens, five isolation and general wards for cats and dogs, with enclosed "runs" adjoining the latter, two operating theatres for large and small animals respectively, with dressing-room adjoining; post-mortem-room, stocks and X-ray apartment, and rooms for teaching pharmacy and giving surgical demonstrations. It is proposed that the stable and other fittings throughout the buildings shall be of the most hygienic patterns. There is a large special laboratory in connection with this department and accommodation for the smaller animals. A bath for horses has been provided, and provision is made for teaching practical shoeing; while there is the necessary food and bedding stores, etc., required for such an establishment. The professors have their private rooms, and there are waiting and consulting rooms adjoining. The electrical work was carried out by Messrs. Malcolm & Allan, Ltd.

D. McARTHY.

Easterton, Milngavie, Dumbartonshire.

THE work illustrated is from a western wing added a few years since to what was formerly a plain square house of classical type, but without much architectural interest either in plan or elevation.

The additional accommodation thus provided comprises a new drawing-room and smoking-room on the ground floor, with bedrooms on two floors over. The old morning-room was altered to form a hall, with a new porch and vestibule; the dining-room was remodelled internally and the kitchen premises extended.

At the same time the garden extending to the west of the new wing was rearranged, with a path opening, across a sunken lawn, axially in line with the semicircular bay window of the drawing-room, and a garden house and dovecote were erected at the diagonally opposite angle.

Externally the house is of a warm white freestone with grey roughcast and dark purple-blue slates. As regards the internal finish, the woodwork of the hall is painted white, that in the drawing-room is lightly stained to a cedar tone and waxed, the walls throughout being all in plain tones of white and dull stucco or fawn colour. The principal contractors were:—

Masons—Messrs. J. H. White & Sons, formerly Albert-road, Glasgow, now at St. Andrews.

Joiners (including finishings)—Messrs. A. & D. McMillan, Milngavie.

Painters—Messrs. John Orr & Sons, Wellington and Glasgow. ALEXANDER N. PATERSON.

Library, Carrickarden, Bearsden.

THIS was an existing apartment—an ordinary parlour—remodelled and fitted as a library. The bookcases, fireplace, panelling, parquet, etc., are executed in "Japanese" oak, which, while it may not be quite so fine as Austrian, has the merit of coming from the country of a friendly Ally. To adopt Austrian oak at present would have been tantamount to "trading with the enemy." The oak is finished in a cool-grey tone, slightly waxed. The mid-walls are treated with Burge's "leather paper," of a quiet neutral tone, divided into panels with bands of like material with dull gilt studs. The upholstered seats flanking fireplace are finished in leather specially treated, the inside of the hides being exposed, presenting a soft, silky surface of a warm brown tone. Below the seats the space is utilised for loose magazines, and, in lieu of an ordinary coal-box, behind one of the flaps a pull-out compartment for coal is provided, with special runners and ball-bearings for ease of handling.

The oak fitments, etc., were executed by Messrs. James Grant & Co., 128, Pitt-street, Glasgow, and the painter-work by Messrs. J. & W. Guthrie and Andrew Wells, Ltd., 237, Old George-street, Glasgow.

WM. HUNTER McNAB.

Dining-Room, Redlands, Bearsden.

THIS forms a wing, added to the side of an existing dwelling, embracing new entrance porch, cloak-room, and lavatory. The house standing on quickly sloping ground, advantage was taken of the fall to obtain a motor-house below; indeed the primary reason for the new wing was to secure motor accommodation, as indicated. The former dining-room became the new entrance hall, from which access is given to the new dining-room, which forms the subject of the illustration.

The builders were Messrs. Dewar & Elliot, Glasgow. The fireplace, of fine white selected Auchenheath stone, was carved by Mr. James Young, Glasgow.

The panelling, in this case of Austrian oak—contracted for, however, prior to the war—is left in its natural state, without stain or polish of any kind, and was also executed by Messrs. James Grant & Co., Glasgow. The floor is of Canadian oak, in plain 3-in. boards, polished over entire area.

The ornamental plaster-work is by Mr. Geo. P. Bankart, London. The plain plaster-work—ceiling and frieze—is finished off the float with pleasing effect. WM. HUNTER McNAB.

Hinton House.

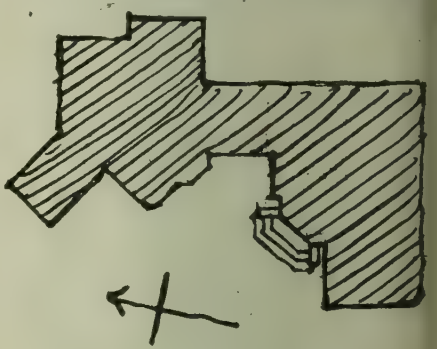
HINTON HOUSE, Northamptonshire, was built under unusually favourable conditions, the labour and materials of the structural work having been provided by a local builder and a commission paid to him on both. Several old stone-workers were found in the district, dressing stones in the old manner with a hatchet-hammer and not with the chisel. These men were turned on to the work, some old dressed stones were also used, and a quarry opened on the estate. The walling in colour is of the rich, deep tone of the well-known local material, the roofs are of red tiles, and all the windows have steel casements. The internal woodwork is mainly of oak. There is some beautiful timber on the estate, and all the old trees in the neighbourhood of the house were retained. The house itself lies well into the sun, near the edge of a large park in which are some great elms.

J. A. MORRIS.

Stobieside, Lanarkshire.

THE estate of Stobieside is in Avendale, Lanarkshire, and the site is on rising ground over 800 ft. above sea-level, with fine views of undulating pastoral country and heather-covered moor around, and the more distant hills beyond. Immediately to the south of the site is the old battlefield of Drumclog.

As shown by the accompanying key-plan, the plan of the house is somewhat irregular to meet the conditions of the site. As the illustrations indicate, the elevations are of the somewhat severe type of work typical to Scotland. The dressings of windows, doors, dormers, crow-steps, gables, etc., are of a grey-pink stone, the walls are finished with harl or roughcast, and the roofs covered with thick dark-blue slates. The interior generally is carried out in plain though typical detail, but in the hall and smoking-room the walls are lined with wood panelling, and the drawing-room has a circular vaulted roof rising from a high-panelled dado. LEADBETTER, FAIRLEY, & REID.



Stobieside: Block Plan of House.

Memorials in Stone and Marble.

THE two marble monuments are in the Cathedral at Glasgow, and were erected some years ago when I was in partnership with the late John Honeyman, R.S.A. They are in the transepts—one in each in the centre of the wall below the transept windows. They are in Carrara marble, the work being done entirely by local contractors.

In the crystal monument the bust is an old one incorporated in the new surroundings. The Sir James Watson bust was executed by Pittendrigh Macgillivray, R.S.A.

One of the stone monuments is at Denison and the other at Rutherglen Cemetery. They are constructed of stone from Craiksland Quarry, Ayrshire, and are also constructed by local contractors. I consider them excellent in craftsmanship. JOHN KEPPIE.

Dalziel United Free Church, Motherwell.

THIS church has been erected from funds bequeathed by Mr. James Clason-Harvie, of Brownlee, whose father was the first incumbent of the old church which is replaced by this arger one.

The site is recessed from Muir-street and is somewhat restricted from east to west; this suggested the square form of church, and the square form in its turn suggested a central dome, with galleries on three sides.

The dome is almost 40 ft. in diameter, supported upon eight stone columns each 20 ft. high and 2 ft. 4 in. diameter at the base. The caps of these columns are modelled on the upper tier capitals at Sta Sophia, and are richly carved, each cap symbolising one of the apostles: SS. Peter and Paul, on either hand as you enter from the west; adjoining these on either side of the dome S. Andrew to the north and S. Philip to the south; S. Thomas and S. James east of these respectively (see p. 467). The square forming the sanctuary is enclosed at the four angles by St. Matthew on the north-west, St. John on the south-west, and by wall corbels symbolising St. Mark and St. Luke, the four evangelists thus enclosing this space. The sanctuary is spanned by a plain barrel vault.

The dome is not set off in the usual manner on pendentives or arches or cornices above the main arcade; nor is there any drum. Indeed to avoid excessive height has been the chief object, so as not to prejudice the acoustics. The dome has therefore been kept low, and springs from the abaci of the columns. The consequence is that with a 40-ft. span and 20-ft. columns the dome is 40 ft. high from the floor.

To further secure perfect acoustical qualities the pulpit is kept within the limits of the dome, attached to the St. John column. The acoustics throughout are excellent.

The springing of the dome from the level of the capitals might be thought apt to give a feeling of lowness or depression. But there is instead of that a feeling of space and loftiness almost unexpected.

Nor do the galleries interfere with this effect, except rendering it difficult to get a photograph to give the true effect.

The pulpit is at the south side of the church, and in order that the sitters may all see well the rake of the south gallery is much steeper than that of the north or west galleries.

Also in order that the massive columns do not unduly impede the view the passages are placed not symmetrically but where sitters would not see; the consequence is that throughout the whole church only eighteen sitters are without a clear view of the pulpit.

Simplicity has been the keynote in the whole design, the only internal enrichment being the carved capitals, the oak work of the sanctuary, and the black iron electric fittings. The dome, arches, walls, and ceilings are all of white plaster finish.

The dome is not intended to be prominent on the exterior; a campanile 110 ft. high rising from the north-west angle gives character to a simple design and forms a conspicuous feature from a great distance.

The architect was Mr. Henry F. Kerr, A.R.I.B.A., of Edinburgh.

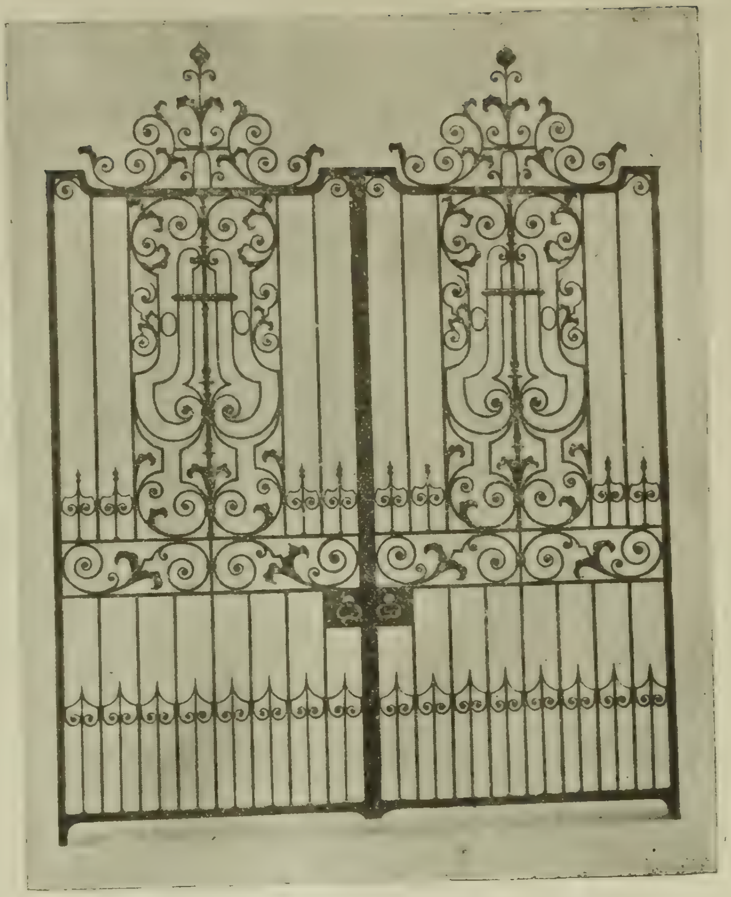
Deanbank Institution, Edinburgh.

THE purpose of this Institution is to provide the shelter and training of a happy Home for Girls.

For eighty years the Institution was conducted on premises in Deanbank-lane, Stockbridge. The School Board, in 1812, finding their school adjoining the Institution too small, purchased the building, and the Directors had to look out for a new site. They obtained a property with large garden in Cavan-lane, Morningside, the existing structure was removed, and the new building erected at a cost of £6,000.

It consists of two floors and a large attic floor, which can be utilised for extension should such be desired. The laundry and washhouse are situated in a separate building.

On the ground floor are committee-room, matron's sitting-room, waiting-room, officials' dining-room, girls' room, and play-room, divided by sliding partition—these two rooms together form a large hall for special functions—girls' dining-room, kitchen, scullery, lavatory, and girls' clothes changing-room, stores, pantries, etc., and lavatory and water-closets.

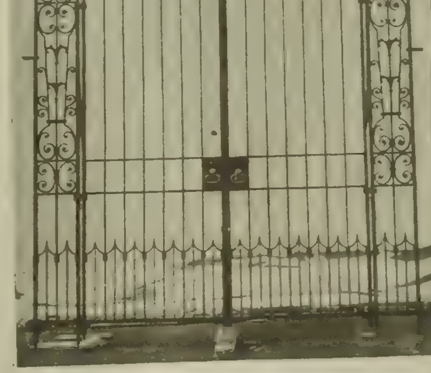


Wrought-iron Gates, Girvan (Ayrshire) Churchyard.

Mr. J. A. Morris. Architect.

On the upper floor there are four dormitories, containing forty beds, sick ward, three beds, matron and assistants' bedrooms, lavatory and bathroom accommodation, with water-closets, large stores, wardrobes, etc., and private bathroom and lavatory.

The grounds are tastefully laid out, the old fruit-trees being retained, and a large play-court is provided for the girls. They are educated in the Board schools. D. MCARTHY.



Gates, Girvan Churchyard.

Mr. J. A. Morris, Architect.

Wrought-Iron Gates, Girvan Churchyard.

THIS is one of the oldest churchyards in the county, and in it during the work was found an early Celtic cross. The church has long been destroyed, and the churchyard and enclosure walls were in shameful disrepair. In very reverent spirit the late Mr. Alexander Johnstone—whose forbears are there buried—received permission to remove the walls, which were of no archæological value, to make seemly the ground and to enclose the churchyard with hewn red sandstone walls and two large entrance-gates. In the larger of the gateways and its forecourt are placed the two gates illustrated; that with the circled head rises by the side of the two stone pillars, the other is the gate of the central stone archway. The gates were made by Messrs. George Wragge, Ltd., Salford, Manchester. J. A. MORRIS.

OBITUARY.

Mr. T. Lumsden.

The death took place at his residence, Danesfield, Jarrow, recently of Mr. Thomas Lumsden, a well-known builder and contractor in the North of England. Mr. Lumsden, who was seventy-five years of age, was born at Lowick, Northumberland. In 1868 he commenced business as a contractor in Jarrow. Amongst many building contracts which Mr. Lumsden carried out were the new Royal Infirmary, Newcastle, the Co-operative Wholesale Society's works at Pelaw, the new wing of Armstrong College, the Heath wing of the Medical College, Newcastle, and the agricultural wing of the Armstrong College. He also built several churches and was entrusted with the erection of a number of secondary and elementary schools. Several mansions in Yorkshire were erected by him, and a recent contract which he entered into was for Ampleforth College, Yorkshire.

GENERAL NEWS.

Professional Announcement.

Mr. Arthur H. Church, Licentiate R.I.B.A., has removed from 12, South-place, Finsbury, E.C., and his address is now 16 and 17, Devonshire-square, Bishopsgate, E.C. Telephone number, London Wall 9588.

The Late Mr. J. A. Martin's Estate.

The late Mr. John Ash Martin, of West Chapel-street, W., builder, has left estate to the gross value of £40,938.

An Adam House for Sale.

The town house of the late Sir James Goodhart, No. 25, Portland-place, is for sale by Messrs. Knight, Frank, & Rutley. It was built by the Brothers Adam for Robert Adam's occupation, and the original decorations have been preserved.

The Late Mr. C. Cox's Estate.

The late Mr. Charles Cox, of Eastbourne, and formerly of Hackney and Stamford Hill, builder and contractor, who died in May last, aged eighty years, has left estate to the gross value of £117,611, including personalty to the net value of £115,522. His many bequests comprise £1,000 each to the Builders' Benevolent Institution and the Timber Trades Benevolent Society.

The Proposed Mid-Scotland Canal.

Lord Provost Sir Thomas Dunlop presided at the last meeting of Glasgow Town Council. Before the ordinary business was entered upon a deputation was received from the Convention of Royal Burghs asking the support of Glasgow Corporation on the subject of a ship canal to connect the Firths of Forth and Clyde. The Lord Provost assured the deputation that the subject placed before them by the deputation would receive careful consideration, and it was agreed to put the matter on the agenda for the next meeting.

New President of the Architectural Association.

The new President of the Architectural Association is Mr. A. G. R. Mackenzie, F.R.I.B.A. Articled to his father, Mr. A. Marshall Mackenzie, A.R.S.A., in Aberdeen, he afterwards studied at the Architectural Association while in the office of Colonel Edis. He commenced practice as partner with his father, in London, in 1904. At the commencement of the war Mr. Mackenzie joined the London Scottish as a private and served in France and Belgium. Severely wounded at Messine, in October, 1914, Mr. Mackenzie spent a year in hospital, we understand, having lost his right leg. "He recently returned to work in London, and now walks five miles a day with an artificial leg, made by a Frenchman, of aluminium, which also enables him to climb ladders and drive his motor."

Educational Books for British Prisoners of War.

Arrangements have been made, with the approval of the Foreign Office, for extending to British prisoners of war interned abroad the benefits of the scheme, which has been in operation for the last year in connection with Ruhleben, for supplying selected books of an educational character to those of the interned who may be desirous of continuing their studies in any subject. Under this scheme several thousands of carefully-selected volumes, mostly standard works, have been supplied to the Ruhleben camp, which is now provided with excellent libraries (class, reference, and lending). These books, which have been sent out through the agency of officers of the Board of Education, have proved a great boon to the interned, and have enabled sustained educational work of a definite character to be carried on by the Camp Education Department formed among the prisoners. An appeal is now made for a plentiful supply of new or second-hand books of an educational character (light literature and fiction is available from other sources) to meet the needs of the many thousands of British prisoners interned in enemy or neutral countries. A circular explanatory of the educational book scheme can be obtained by sending a postcard addressed to the Board of Education, Whitehall, S.W., to Mr. A. T. Davies, who is in charge of the arrangements.

Roman Catholic Church, Lartington.

The new St. Lawrence's Roman Catholic Church at Lartington, near Barnard Castle, has recently been opened. The building has been erected at a cost of nearly £3,000. The church was designed and built by Mr. Anthony Lyons, of Norton (Malton). It consists of a sanctuary with a baptistry at the back, from which a spiral staircase ascends to the choir gallery. The presbytery adjoins the main building, which is constructed with stone from Cotherstone Quarry.

The Veterans' Club Association.

The Lord Mayor (Sir C. C. Wakefield) presided at the Mansion House on the 22nd inst. over a meeting held in support of the appeal to establish and endow the Veterans' Club as an Imperial memorial to those who have fought in the war. The following motion was unanimously carried:—"That an Imperial memorial to those who have fought so bravely for the Empire be created by establishing and endowing the Veterans' Club on a permanent basis in new and adequate premises for the use, comfort, recreation, and assistance of those surviving on their return to civil life, and by establishing and endowing convalescent homes in connection with the Club for the use of members who suffer from wounds or sickness."

The Lions of Stratford-Place.

Richard Cosway's house at the western corner of Oxford-street and Stratford-place is being demolished to make way for modern business premises, and that part of London loses one of the last of its eighteenth-century features. Each house at the corner of Stratford-place was flanked by a watchman's box, with a tablet on the Oxford-street side of each box bearing a device of two eagle-headed and winged lions sejant rampant, and on the roof of each a lion couchant in stone. The watch-box at the eastern corner was preserved when the premises were rebuilt for the London County and Westminster Bank, and the other is apparently to remain, for the lion on the roof has been boxed in to preserve it from injury.—*Times.*

National Association of Master House-Painters and Decorators.

At the quarterly council meeting of the National Association of Master House-Painters and Decorators of England and Wales (Incorporated), held at Painters' Hall, Little Trinity-lane, E.C., on June 6, Mr. Foster submitted the recommendation of an informal meeting of members at the L.C.C. School of Building, that a small committee be appointed to consider the question of the admittance of students of the school to the apprentices' competitions, and moved that such a committee be appointed. Mr. Brook Jackson seconded, and this was carried. The following gentlemen were appointed:—Messrs. Harris (Plymouth), Bar (Leicester), Milligan (Halifax), Foster (Burnley), Cantrill (Manchester), Peters (Sheffield), Roberson and Wilkinson (London), and the Secretary.

Glasgow Housing Problem.

Mr. McKinnon Wood, M.P., received at Glasgow recently a deputation representing the trade unions, co-operative guilds, and similar organisations included in the Glasgow Labour Party Housing Association. The delegates dealt with the serious shortage of housing accommodation, and asked the Scottish Secretary to lay before the Government the urgent necessity for the State providing, interest free, ground for house building. The Scottish Secretary, in reply, said the proposal would require careful consideration, as it implied practically one million sterling for Glasgow alone the first year, and if they took the United Kingdom on the same basis of population that represented fifty millions sterling. There were three difficulties in the way of dealing with such a question during the war—first, the enormous artificially increased cost of building material; second, the great scarcity of labour; and third, the very high rate of interest that the State had now to pay. Glasgow housing conditions were extremely unsatisfactory, and something would have to be done to deal with the conditions that were prejudicial to health and damaging to the moral standard of the community, but he was afraid they must wait till after the war.

PROFESSIONAL CLASSES WAR RELIEF COUNCIL.

An admirable record of work done was shown in the first annual Report of the Professional Classes War Relief Council presented at a meeting held at the Mansion House on June 20. It will be remembered that the Council was formed shortly after the outbreak of war in order to deal with distress within the professional classes, and representatives of the chief professional bodies associated themselves with the movement. At the present time amongst those serving on the Council are Mr. E. Newton (President, Royal Institute of British Architects), Mr. George Hubbard, F.R.I.B.A., Mr. Ian MacAlister (Secretary, Royal Institute of British Architects), Mr. T. E. Bare (President, Quantity Surveyors' Association), Mr. H. Chatfeild Clarke (Surveyors' Institution), Mr. A. S. E. Ackermann (Society of Engineers), Mr. H. M. Fletcher (Hon. Secretary, Architectural Association), Mr. Percy B. Tubbs (Society of Architects), Mr. Paul Waterhouse (Architects' War Committee), Mr. F. R. Yerbury (Secretary, Architectural Association), Mr. A. T. Wakelam (President, Institution of Municipal and County Engineers).

The work of the Council is carried out by a number of committees, but the general statistics showed that the percentage of architects applying for relief was 3·75 per cent. of the total applications. The range of work undertaken by the committees includes the education of children of distressed professional men, the training of adult daughters, assistance to enable male students to continue their studies, maternity aid, the finding of temporary employment, etc. One of the committees, of which Mr. Colton, A.R.A., is the Chairman, and on which Sir Aston Webb, Messrs. E. Newton, P. Waterhouse, and Chatfeild Clarke serve, developes schemes for the employment of artists and deals with cases of distress. During the year several exhibitions of pictures, arts, crafts, etc., were held, and there is evidence that artists obtained a considerable amount of employment through this means. In July a permanent arts department was opened, which has developed considerably, and now provides a link between the public who have commissions to give in art work which they are willing should be carried out by those in difficulties owing to the war, and the artists themselves.

The Lord Mayor said there could be no doubt that no class had been so affected by the war as the professional classes. The working classes had never been so prosperous, as the war had brought them greatly increased wages and continuous work, whilst the professional classes had not only lost their clients, but had the pre-war millstone of commitments in the shape of rents and taxes, school fees, and so on from which they could not extricate themselves without assistance. He therefore earnestly pleaded for increased help to enable the Council to deal with the many cases which came before it.

His Eminence Cardinal Bourne proposed:—"That this meeting is of opinion that the work of the Professional Classes War Relief Council has been proved to meet a definite need at the present time and is deserving of continued and increased public support."

Mr. Marshall Hall, K.C., M.P., seconded the resolution, and said he thought the professional classes were going to suffer more in the future than in the immediate past, and it behoved them all to do what they could to meet such an emergency.

Mrs. Scharlieb, M.D., having described the work of the Maternity Home, Sir John McClure spoke on the educational work of the Council, and said that 450 children had been helped, and grants had been made for 160 children at boarding-schools. He remarked that now they were all so busily engaged in giving up the luxuries of their neighbours they might try and assist their friends.

The resolution was carried.

The Right Hon. Lord Justice Phillimore, in proposing a vote of thanks to the Lord Mayor, said that one class greatly affected were those engaged in works of construction. Especially were architects and the humbler members of the architectural profession affected

Leading Contents.

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MEETINGS.

FRIDAY AND SATURDAY, JUNE 30 AND JULY 1.

Institution of Municipal and County Engineers.—Forty-third annual general meeting and conference, at Blackpool.

WEDNESDAY, JULY 5.

Royal Archæological Institute. — Seventy-fourth annual general meeting. 4.30 p.m.

◆

CORRESPONDENCE.

Charing Cross Bridge.

SIR,—Would you be good enough to tell me through your columns why the name of C. E. Mallows is never mentioned in all the tempest on paper over the Charing Cross Bridge? Are the combatants so ignorant that they do not know that Mallows devoted far too much of his time and energy to this matter? Or are they too mean to acknowledge that they are trading on what he, in and out of season and place, advocated, and no one paid the slightest attention to him? JOSEPH PENNELL.

The Late R. A. Briggs.

SIR,—My attention having been drawn to an error in your obituary notice of my brother, R. A. Briggs, I trust I may correct it, especially in view of the fact that from my personal knowledge the officials of Worcester Cathedral frequently inform visitors, wrongly, as to the source of the designs for the Jesus Chapel there. In your notice you state my brother made the designs for Jesus College Chapel, Cambridge. This should read Jesus Chapel, Worcester Cathedral. *En passant* one may express the regret that the colouring of the work (executed by Messrs. Martyn, of Cheltenham) has not, so far as I know, been completed as my brother intended. ALBERT E. BRIGGS.

Diseases of Occupation among Painters and Plumbers : Board of Trade Figures—and Others.

SIR,—One is pleased to observe that after months of controversy your correspondent who writes over the name of "Philadelphian" has appreciated the fact that there is no compulsion to report cases of non-fatal lead sickness among house painters, and that, therefore, as the recent Report of the Departmental Committee on the use of Lead Paints states, "there are no reliable statistics" of such cases.

No one is likely to regard "Philadelphian's" own attempt at working out the number of cases as anything but a sheer guess; on the other hand, he puts forward two statements of fact which are curiously misleading and are worth contradicting:—

1. "The average age at death due to all causes in the painting industry is no less than eight years younger than all males." This statement is apparently based on the report of the evidence of Dr. Collis (page 46 of the Departmental Committee's Report). Dr. Collis states that in the case of two trade societies "the median age at death which Bowley in his book, 'Elements of Statistics,' regards as the most useful form of average . . . is eight years lower than it is for all males," and says that "these conclusions agree almost exactly with the corresponding deduction from the Registrar-General's figures." In the first place it should be made clear that this deduction is not a statement of the Registrar-General's: it is merely a calculation made by Dr. Collis. In the second place, Mr. Bowley nowhere in his book says that the median age at death is the most useful form of average. No one who was not ignorant of the most elementary principles of vital statistics could use such an average without regard to the age distribution of the sections of the community which are compared. The following instance will demonstrate this fallacy. The population of almshouses would yield a high "median age at death" because they are usually composed of old people, while the undergraduate population at Oxford would yield a low "median age at death." It is obvious that a comparison between the two populations (ignoring age distribution) would lead to the ridiculous inference that the incidence of mortality among the undergraduates of Oxford is much higher than in almshouses. This presumably is the sort of thing that is meant when people say that statistics can prove anything. They can be made to appear to prove anything, however ridiculous, unless all the necessary factors are taken into consideration.

The second statement is that "in every 100 deaths which have occurred among members of painters' societies between thirteen and fourteen occurred from causes attributable to lead." This is again based upon the evidence of Dr. Collis, who makes this statement in regard to the members of two trade societies. When these Reports are looked at it is found that they merely give a report of deaths with the age at death. There is no adequate record of the *numbers* exposed to the risk of death at each age or at any group of ages; and in default of this no accurate comparison of death rates is possible.

The fact is that these statements are among the most glaring instances of the notoriously amateur statistics which were presented to the Committee.

If "Philadelphian" will look at the figures of the Registrar-General he will find a much more accurate view of the rates of death among house painters on page 182 of the 1908 Supplement:—

	Comparative Mortality Figures.
(1) All occupied males, industrial districts	1,122
(2) All occupied males, London ..	1,099
(3) Group 64—painters, plumbers, glaziers	1,041
(4) All occupied males, England and Wales	925

Thus it may be seen that the mortality of Class 3 (of which the vast majority are house painters) compares well with the mortality of all occupied males in the industrial districts, and even with that of all occupied males in London, although that group contains large numbers of professional men not subject to the most ordinary trade risk. Indeed the comparative mortality of painters is only very slightly more than that of all occupied males in England and Wales.

From the Registrar-General's returns "Philadelphian" may also find that at all ages between fifteen and fifty-four the mortality among painters is lower than that among all other industrial occupations.

The subject is of sufficient importance to be worthy of more careful treatment than the slipshod estimates quoted by "Philadelphian." I would call the attention of your readers to the good sense of the remarks of your "Notes" for June 9:—"We know . . . that if reasonable precautions are taken and cleanliness insisted on there is little danger to health. . . . Most of the danger arises from the dry rubbing down of old painted work, which can be dispensed with or only permitted if the painter wears a respirator; the remaining dangers are obviated by ordinary care and cleanliness, which are within the control of the individual." ENGLISHMAN.

BOOKS.

British Standard Specification for Wall Plugs and Sockets. Issued by the Engineering Standards Committee. (London: Crosby Lockwood & Son. Price 5s. net.)

THIS is the seventy-third Report issued by the Engineering Standards Committee, and it contains a standard specification for wall plugs and sockets—five ampere two-pin without earthing connection.

The description covers domestic wall plugs and sockets for pressures not exceeding 250 volts, and particular attention has been devoted to the fact that interchangeability is of the greatest importance. In consultation with the manufacturers the dimensions necessary to obtain this interchangeability have been agreed upon, the actual design of the plug being interfered with as little as possible. It is of interest to note that the standard plug is required to have side-entry for the flexible wire and a suitable shield. The Report is divided up into different sections devoted to the Plug portion, Socket portion, General and Appendix, and there is one plate illustrating dimensions of gauges. This specification is a very useful addition to the excellent publications of the Committee, and should be acquired by all those interested in electrical accessories.

Third Appendix to the Sixth Edition of Dana's System of Mineralogy. By WILLIAM E. FORD. (London: Chapman & Hall, Ltd. Price 6s. 6d. net.)

THE "Sixth Edition of the System of Mineralogy" was published in 1892, and the book now published is the third Appendix, covering, as far as possible, the period between January 1, 1909, and January 1, 1915—six years in all. The author divides the new names into three classes:—(1) Of varieties; (2) of doubtful species; (3) of established species; and three kinds of type are employed in the classified list to distinguish these classes. The most important development in mineralogical investigation during the period covered by the present volume has been the use of the X-ray as a means of studying the molecular structure of crystals. There is every possibility of great results being obtained by this method of investigation when it has been more fully developed.

The book is well arranged and must have entailed considerable work on the part of the author, but the circulation will be strictly limited to those who make a serious study of mineralogy, as there is no text of general interest.

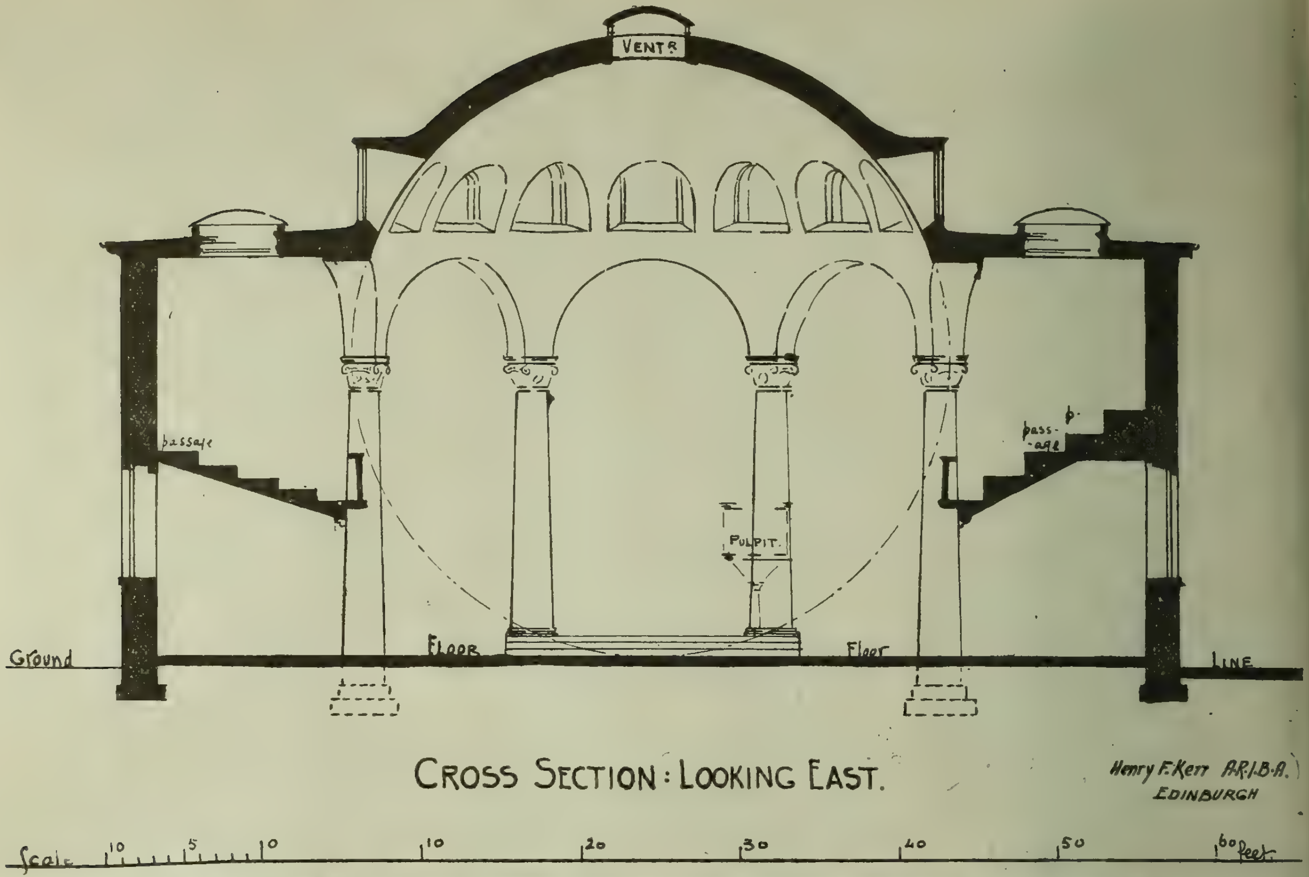
Analytic Geometry. By H. B. PHILLIPS, Ph.D. (London: Chapman & Hall, Ltd. Price 6s. 6d. net.)

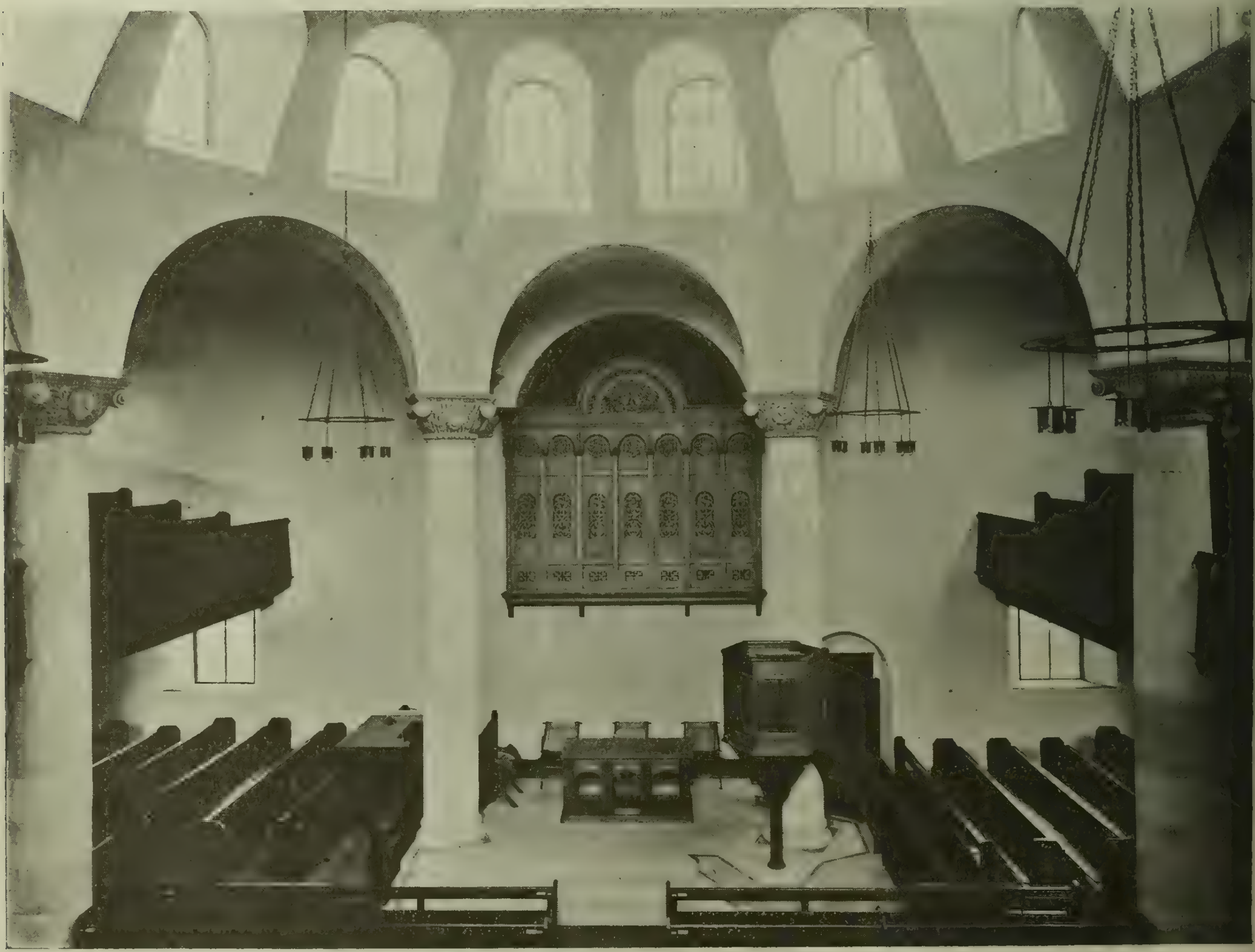
THIS is a very useful book, prepared to equip the student for work in calculus and engineering without burdening him with a mass of detail useful only to the student of mathematics for its own sake. There is no doubt that the differential calculus should be given to the student as soon as possible, and any book which tends to simplify matters is very welcome. The author has wisely commenced at the very beginning of the subject, and explanations are given of the algebraic principles and processes which are used so much in analytic geometry. This is followed by notes and examples dealing with rectangular co-ordinate, straight-line and circle, second degree equations, graphs and empirical equations, and other allied subjects, and in every case the text is simply expressed, and the average reader should have no difficulty in following the reasoning. Several clearly-drawn diagrams are given throughout, and answers are provided to all the exercises at the end of the volume, thus making the book very suitable for home study.

◆

MR. T. K. GREEN.

The death, on June 23, is announced of Mr. Theodore Knolles Green, of No. 70, Finsbury-pavement, E.C., and No. 2, Ellerdale-road, Hampstead, N.W. Mr. Green was elected an Associate of the Royal Institute of British Architects in 1861, and he was the architect of St. Barnabas Church, Islington.

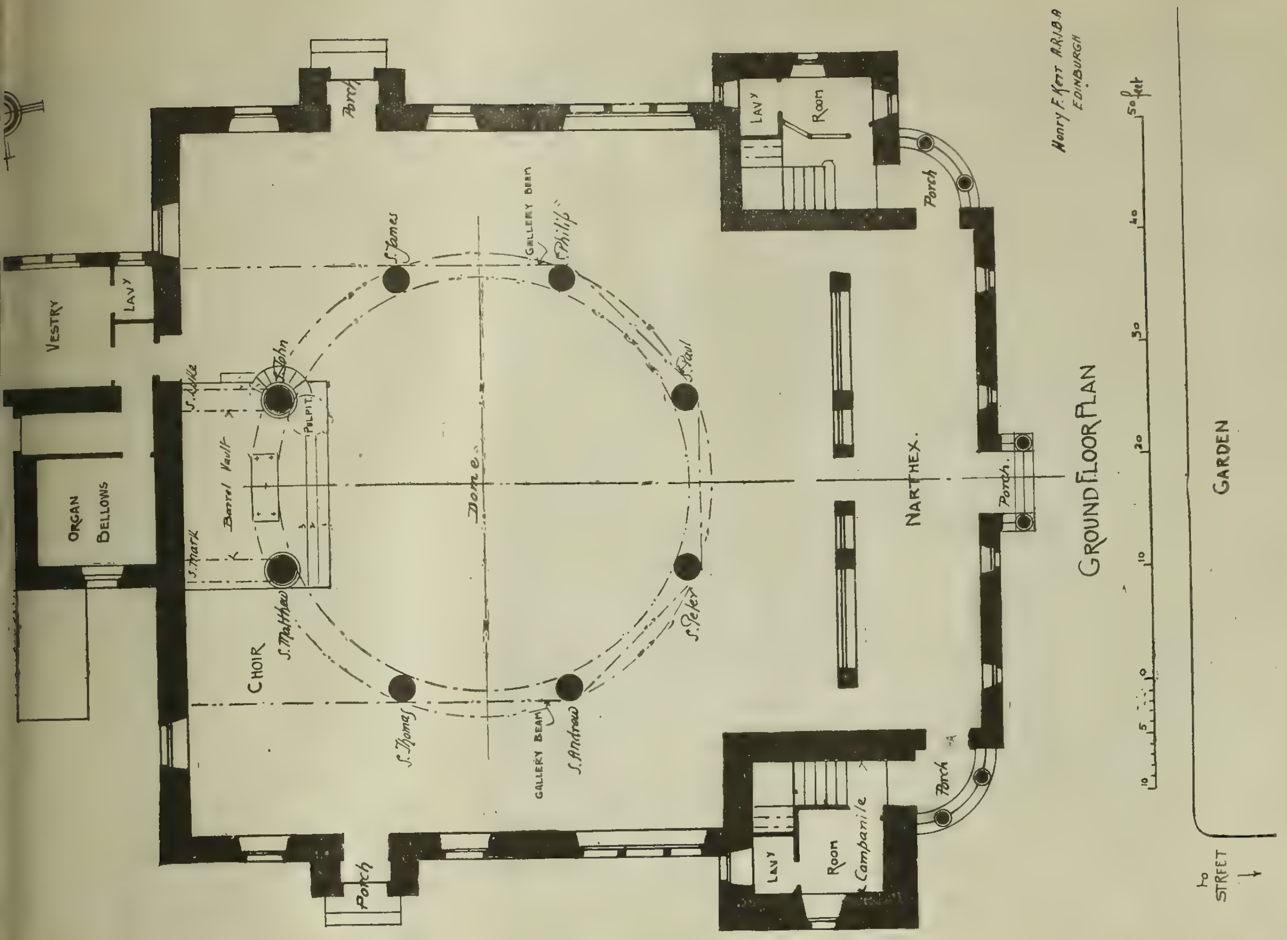


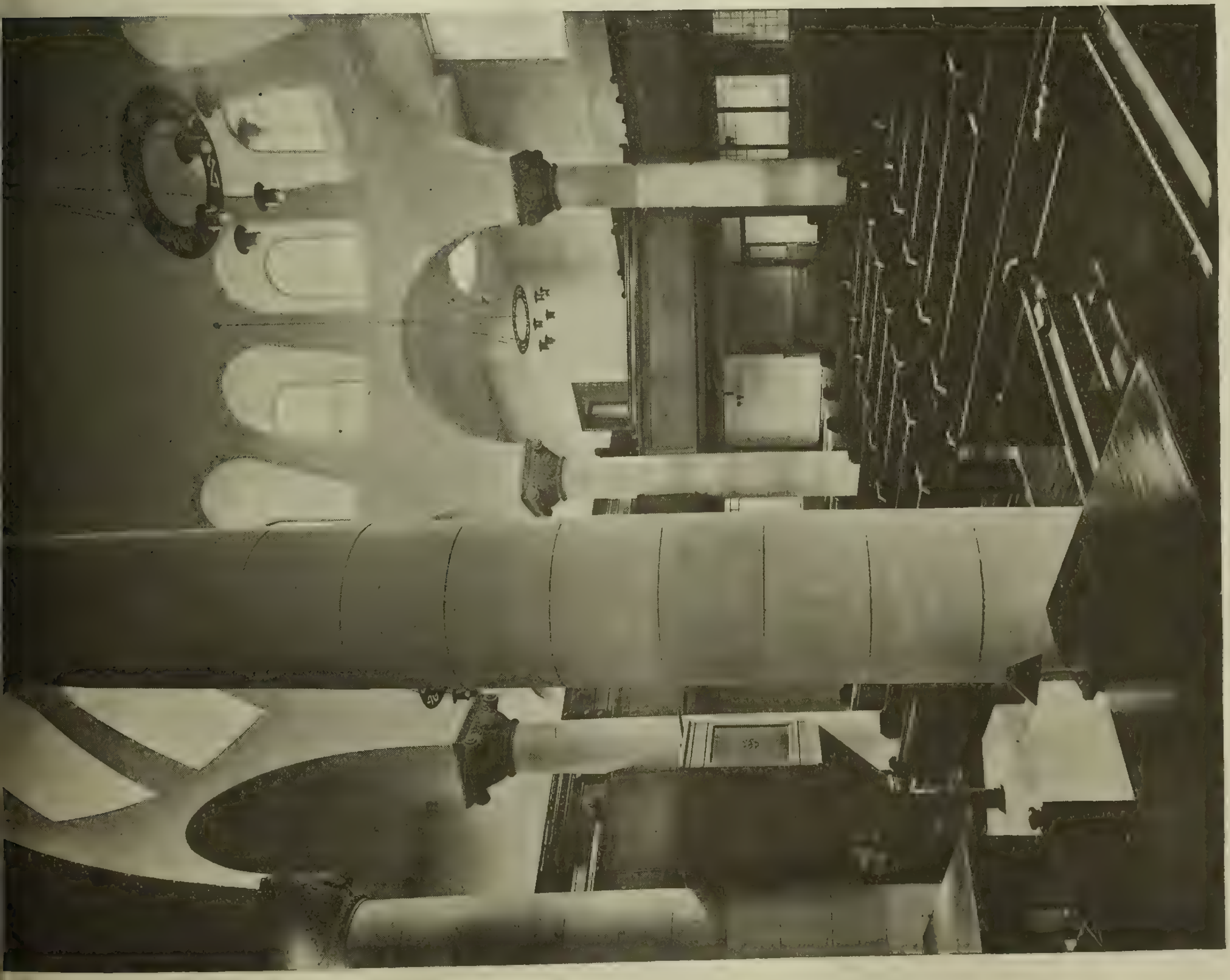


Interior looking East.

Dalziel United Free Church, Motherwell. (*See page* 469.)

Mr. H. F. Kerr, A.R.I.B.A., Architect.



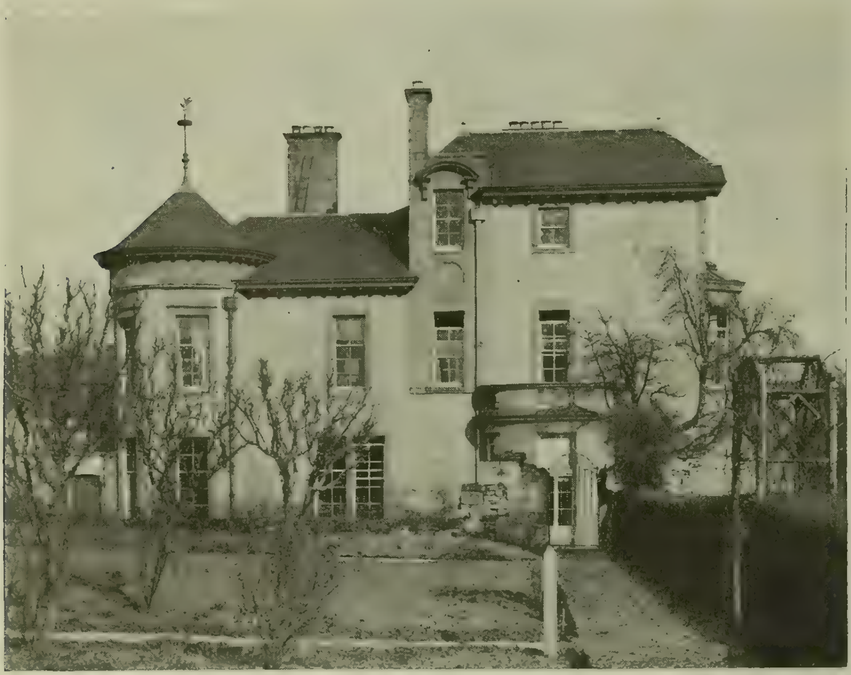


Interior from Choir Seats.

Dalziel United Free Church, Motherwell. (*See page 469.*)

Mr. H. F. Kerr, A.R.I.B.A., Architect.

ARCHITECTURE AT THE ROYAL SCOTTISH ACADEMY



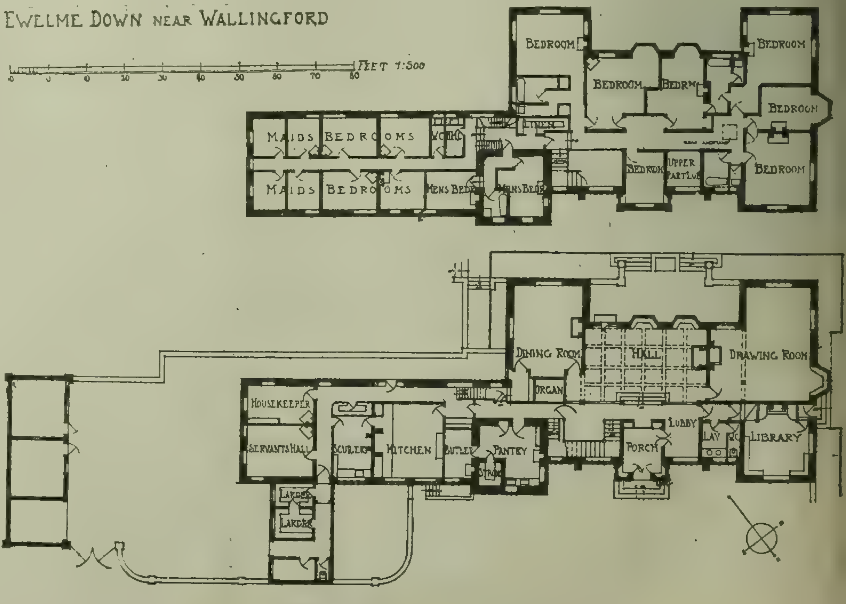
Easterton, Milngavie.

Mr. Alexander N. Paterson, Architect.

A GLANCE is sufficient to show the exceptional nature of the times; the preponderance of photographs tells of completed, not prospective, work; there is not a solitary competition drawing on view, perspective or otherwise; that any building at all is contemplated one gathers from three or four instances only. The two largest exhibits are geometric drawings with businesslike constructional details, and there are several others of the kind—a welcome variant, long urged in these columns, on the merely pictorial delineation that obtained, but just because so good an innovation one to be carefully guarded against anything likely to prejudice its success; a caution is needed as to excessive display of building technique. An ideal illustration of a building would be photographs—or prepared views of projects—with a sufficiency of plan, section, and detail to show how the effect was had; this is reached in Khartoum Cathedral (No. 559), published recently—over-reached indeed, for it is excess when a quite simple plan 170 ft. long is shown to ¼-in. scale. Elevations and sections to that size are tolerable, but barely when the harsh colours of materials, in section, necessary for practical purposes, fairly kill the parts that one actually sees in a building; is it expecting too much that an exhibitor should prepare fresh tracings of such working drawings, with the real interior of apartments, emphasised by shadings, roofs, foundations, and the like, being kept unobtrusive and only a sufficient plan? The other big stretcher has a tower and gable to even a larger scale (½ in.)—Gourock Municipal Buildings (No. 525), by Mr. A. N. Paterson, one of the few projected buildings. Specially prepared, but not an actual working drawing, it avoids these objections, has sufficiency of technical details, besides small plan and elevations of the whole scheme, and, excellently coloured by the architect himself, has enough of pictorial effect. The tower is well detailed, and as a feature is appropriate to its locality and position; the style is the more defined Classic that succeeded seventeenth-century Scottish Renaissance. The Council chamber promises to be a fine apartment.

Sir John Burnet's Institute of Chemistry (No. 564) has ½-in. working drawing prints of the elevation and section and a plan to smaller scale, supplemented by a pen-and-ink perspective and a photograph that permits of instructive comparison. The detail of door and the little interior stair is charming, but the general effect is disappointing; the brickwork is more than a trifle bald; the arch voissoirs might well have been emphasised as the sketch suggests. Sir John maintains the northern practice of recessed windows—9-in. reveals here—
preference to the flush frames painted whi
the obsession of English architects; but ev
their welcome depth does not make up
want of design. Of the new Sacristy
Brussels Cathedral (Nos. 535, .536, 5
Mr. Caluwaers gives scale drawings of t
general elevation and larger details of do
and one bay, all most elaborately shaded
pen and ink, with photographs of the co
pleted work. Working ½-in. scale drawin
of a staircase, with photographs (No. 54
Ardenrun Place, Surrey, by Mr. Erne
Newton; the finishing is in wood wi
an Order, and panels of tapestry, but t
feature is the raking stair parapet of pierc
carved scrollwork and children's figures-
the carver's name might have been adde
Supplementing the photograph of a ni
foliage-clad house, Ewelme Down (No. 561
by Mr. Walter Cave, is a mounted line
working drawing; that it shows signs
use is not to be complained of, but it
to be hoped the thrifty practice will n
increase.

Ecclesiastical work, if not dominant, abo
equals in importance any other class
building represented. The principal proje
is Sir J. Burnet's Second Church of Chri
Scientist (No. 526), shown in a full set
$\frac{1}{16}$-in. geometric drawings and a lar
perspective. The church is square, dom
covered, with four shallow recesses formi
a Greek cross; these are barrel-roofe
three contain galleries; the fourth forms t
chancel and has a screen of columns, a
where the rood beam usually is, in
four arches it appears, and from them ha
lamps. The area floor has a considerab
fall to the platform, and the side and corn
entrances are cleverly arranged. The sty
is Byzantine, and there is a square tow
with a circled story and conical spire.
seems a pity that externally the dome as
feature of the composition does not appea
lost by a needless solid parapet that mak
a high square against which the four arr
of the cross abut; these in turn have the
height gratuitously added to by circl
pediments—from the sides seen to
gratuitous—surely too big and rather aw
from the style. A nice feature is t



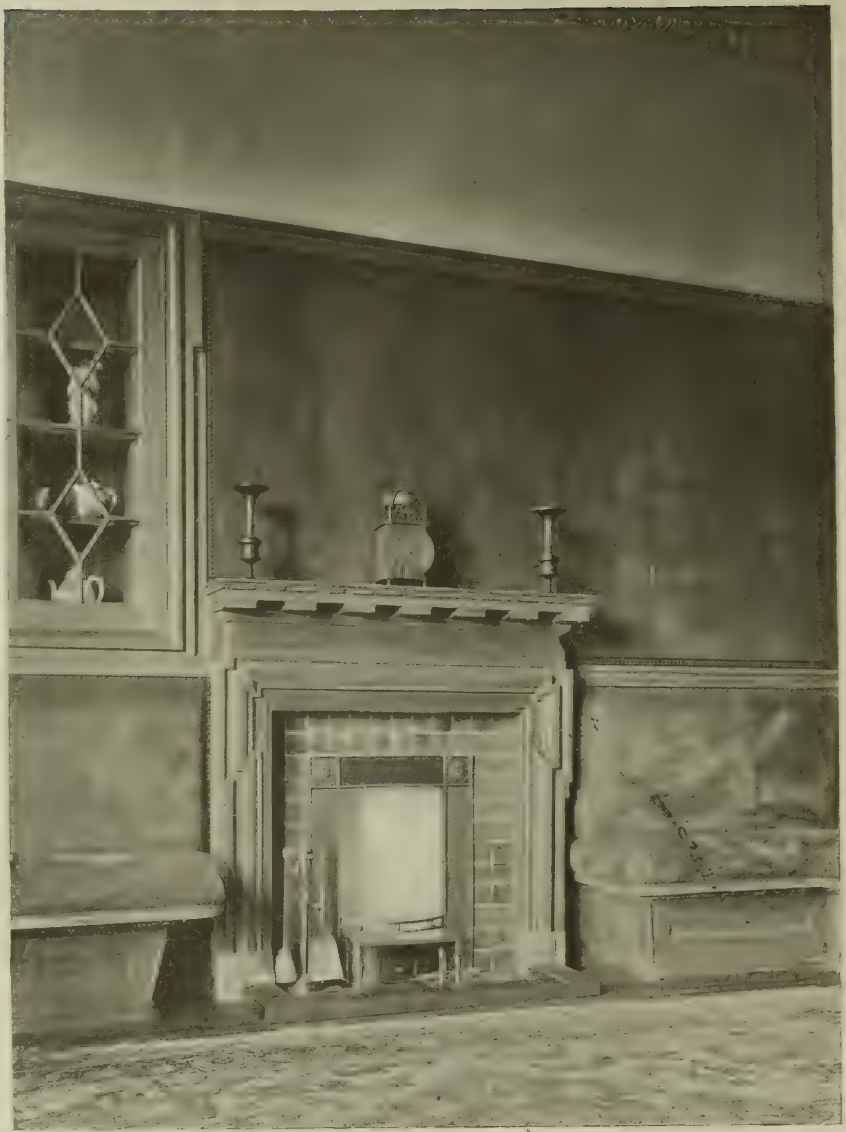
Mr. Walter Cave, Architect.

caded cloister-walk, but again too big in ale, and its termination as shown to be esumed as only a temporary arrangement. e clever coloured sketch would be even tter with the exaggerated dabs of blue d emerald green omitted. This about cludes the geometric delineations of ildings.

Mr. Gilbert Scott's two churches, St. ul's, Liverpool (No. 566), and Northfleet o. 567) are shown by photographs; tle key plans would have helped; both e fresh and suggestive of the newer Gothic. he latter, almost wholly of brick, has a noble est tower; its entrance front is especially e, if from the rear a little unshapely and o much a back view; the level clerestory d flat square-panelled ceiling hardly please well. St. Paul's, with three lateral bles, hipped at their apex—to mark off om the chancel?—and rather formless ntral tower has, on the other hand, its st within—a vaulted interior. St. Bride's, yndland, Glasgow (No. 573), is one of odley's churches, modified and completed Mr. Harold Ogle Tarbolton; a key plan ere is certainly desirable, not only to show e general disposition, but which is the new art. The photographs are of the interior ly, so Mr. Tarbolton's fine tower is not own.

St. Wilfred's, Harrogate (No. 542), is by Mr. emple Moore; it shows the interior only, hotographed from several points of view, ut even then difficult to make out without a lan, and hardly seen to advantage because nfinished, without floor in some parts and ith workmen about. The Gothic is of a holarly kind without eccentricity, yet not cking in niceties of detail that remove it from he merely antiquarian. Mr. Temple Moore lso sends the Bishop's Hostel, Lincoln (No. 37), a Gothic chapel; and Pusey House, xford (No. 538), in ¼-in. pencil elevation, a harming study in late Gothic. Besides is Khartoum Cathedral, Mr. Weir shows St. ndrew's Chapel, Westminster Cathedral No. 553), by photographs, the colour by eometric drawings of the decoration.

Of public buildings beyond those already eferred to the Liverpool School of Archiecture (No. 556) is perhaps the most mportant. Professor Reilly is to be ongratulated alike on his designing and in ime occupying so fine a home as this romises to be. Only a large well-coloured erspective is given—the figures are too tall nd dwarf the building—so the internal rrangements must be taken on trust. After he Florentine palace model, with ground floor lmost unbroken except by the entrance, bove is a large Doric Order of three-quarter olumns, the shafts apparently of brick, ike the rest of the walling, and over that a rieze of panels and square windows, and ll surmounted by a noble cornice—doubtless kylights or rear windows permit of its ncroachment on wall and window space; ndeed throughout one envies the amount of blank wall preserved. A frame of Mr. Lutyens' Delhi schemes (No. 552) shows photographs of wash drawings. The Ballroom exterior is admirable in its plain walling and far-reaching cornice, and internally the rectangular apartment has enough of interest in the openings of its wall, but the quite flat ceiling needs something to break up its surface; even painted lines would do, but more than the slight and spotty Pompeian decoration shown is required. For much the same reason the interior of the domed Durbar Hall (No. 551) is hardly satisfactory; itself resting on arches, with the Pantheon eye but minus its coffering, there is a want of articulation, and if a clear zone is desired it should not be broken into by more circles in the form of decorative panels. The Memorial Column (No. 551) is of a usual fluted Doric type, on a pedestal, itself on a sub-base, and surmounted by a piece of ornament that probably for Indians has some symbolical significance to justify its prominence; otherwise it is hopelessly coarse. The Colonial Palace, Gand (No. 546), by Mr. Caluwaers, is not equal to his Gothic work already noticed; the interior is singularly unimaginative. Another exhibition pavilion (No. 539) is only exhibition architecture, and a little commonplace. Sir R. Rowand Anderson sends photographs of some of his earlier work—(No. 533), the fine dome to Edinburgh University in severe Classic; sumptuous Gothic at Mount Stuart Chapel (No. 534); interior of the Antiquarians' Hall (No. 531), likewise Gothic, with provokingly assertive riveted ceiling girders; a dignified Georgian interior, the Senate House, St. Andrew's (No. 532)—there is a painting of this interior elsewhere in the exhibition; and the great Celtic memorial cross to Dean Ramsay. Other memorials are (No. 571) Mr. John Keppie's two from Glasgow Cathedral in the Italian manner, of coloured marbles, and two grave monuments in stone. Mr. James Miller has a coloured perspective of an important city block—tea-rooms and a picture-house in Glasgow (No. 565), of Carrara ware, the ground floor is of white marble, and has a great doorway with green marble columns and bronze capitals—a well-detailed composition in Empire style. The Royal (Dick) Veterinary College (No. 575), by Mr. David McArthy, is a large building, but even so it has too many features; a great Order in the centre with another in the wings only a little smaller is disturbing. In domestic work Sir Robert Lorimer's modest contribution, Kinellan (No. 572), is a very quiet square house that looks very like one of eighteenth-century date, but it may be modern; in any case the simple combined door and side windows with the approach of steps and open railing is delightful; parts of interior, too, have the same quality of reserve and delicacy. Besides the staircase noticed, Mr. Ernest Newton has several characteristic works:—House in the Grand Duchy of Luxemburg (No. 540), an exportation pure and simple, only the central court and the axial lay-out marking it off from the home article; Ardenrun (No. 547), where the feature is a porch in correct Classic; while (No. 541) is of old English cottage type—walls tile-hung, and real half-timber gabled porch, just a trifle antiquarian; Luckley, Wokingham (No. 544), is really more reasonable; No. 545 is a nicely-coloured small-scale geometric drawing of a house in Surrey. Heathcote (No. 522), by Mr. Lutyens, a photograph of a

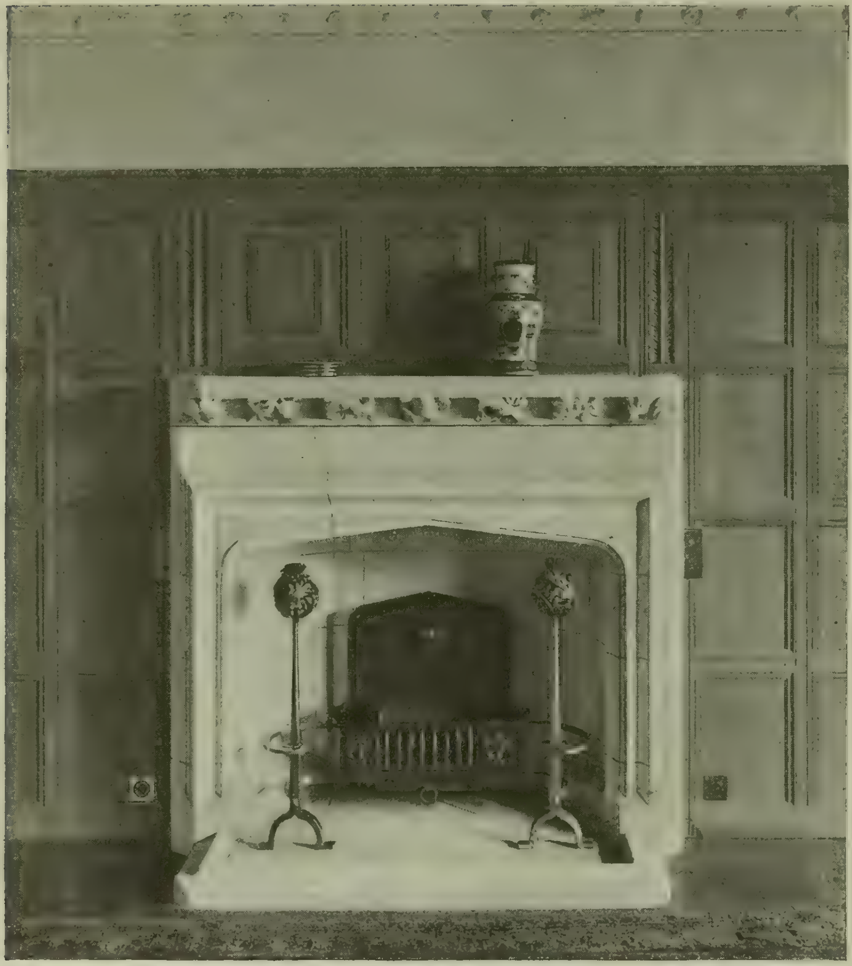


[*Photo.: Annan.*

Library, Carrickarden, Bearsden.

Mr. Wm. Hunter McNab, F.R.I.B.A.

(The Scottish Royal Academy Exhibition.)



[*Photo.*: *Annan.*

The Dining-Room, Redlands, Bearsden.

Mr. Wm. Hunter McNab, F.R.I.B.A.

large country house almost too full of interest, of good Italian type, in stone with roll tiles on roof and, rather needlessly, on a mid-cornice; in the hall interior, stone finished, are some eccentric mouldings; the pillow frieze is overdone. Easterton (No. 520), by Mr. A. N. Paterson; photographic views of large additions to a house, externally very pleasing; there is a detached stone summer-house with upper story rather quaintly treated; within, one of the rooms has the ceiling architecturally treated with large cove and intersecting groins. Stobieside (No. 524), by Messrs. Leadbetter, Fairley, & Reid; in this is a room with a semiround barrel ceiling whose springing is only some 5 ft. from the floor—surely overdone; a segmental or elliptical form would permit of picture hanging; externally the seventeenth-century Scottish character is got very well and unaffectedly. Howbury (No. 528), a nice house of the English type, by Messrs. Mills & Shepperd; with some other pieces. Mr. McNab's interior of dining-room (No. 568) shows a rather formal projecting stone Tudor fireplace, wood panelled walls, and deep plaster beams with sloping sides, and the slight modelled work usually given that form. An interesting archæological essay is Mr. Kelly's academically-restored Aberdeenshire Castle, of date 1600, shown in scale drawings and brown wash; one would wish it carried a little further, giving sections of the apartments, their decoration and furniture. Hinton, Northamptonshire (No. 560), by Mr. James A. Morris; a frame of views of a very interesting house, early English Renaissance, full of delightful details. The same architect has also some wrought-iron gates, at Girvan, with good scrollwork, but rather affectedly bare at the centre, plain bars only; these make it look poverty-struck rather than simple. Other interiors, all shown by photographs, are Messrs. Stewart & Paterson's house at Auchterarder (No. 570), and Mr. Devlin's (No. 577), with plans in addition, all good taste, and still others pleasing enou but little more than furniture upholstery. On the whole the exhibit does not rise above a respectable level merit on the part of Scottish archite A good deal of its interest and value owes to English contributors. Certai photography is the best way of illustrat executed work; all the same, one may reg a little what is lost to draughtsmanship

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FIFTY YEARS AGO.

Breach of Apprenticeship Contract: Raymont *v.* Minton.

THIS was an action in the Court Exchequer for breach of covenant in a de of apprenticeship.

The defendant, who resided in Wilmingto square, covenanted to teach the plainti stepson the business of a builder, ornamen painter, and decorator, and to supply hi with meat, drink, and lodging. During t month's trial the young man was treat very well, but afterwards he was subjecte according to his account, to all kinds of i usage and indignities. Instead of bei taught the trade, he was employed as labourer; he had also insufficient food, a for a year and a half he had to sleep on fo chairs in the kitchen, which was swarmi with black beetles and cockroaches, and dress in an open area.

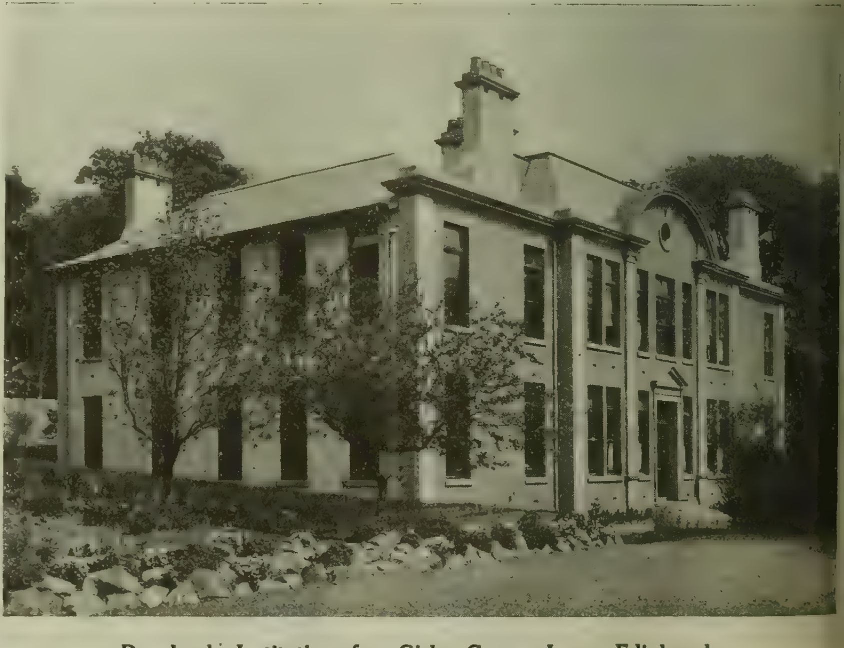
On the part of the defence there was complete denial of all these allegations, a counter-charges of misconduct were ma against the apprentice.

The jury, before retiring to consider th verdict, asked the learned judge wheth they had power to cancel the indenture apprenticeship.

Mr. Baron Martin: You have no pow to do that. You can only find damages f breach of covenant.

The jury, after a brief absence from cou found a verdict for the plaintiff—damage £29.

[*** From the *Builder* of June 1866.—ED.]



Deanbank Institution for Girls, Canaan-Lane, Edinburgh.

Mr. D. McArthy, Architect.

(The Scottish Royal Academy Exhibition.)

THE BUILDING TRADE.

THE REBUILDING OF BELGIUM.—III.

AFTER the war Belgium will be financially damaged in consequence of what she has undergone. Its Government ; no means of making good the large present enses which are being accumulated. The ritory which is occupied by the enemy has n exploited in the most tyrannical and dis- iest manner, and from the first days of the asion theft, robbery, and violence have been ictised by the Germans, both by soldiers, ierals, and administrators, including repre- itatives of the German royal houses.

What they could not take away they have stroyed, apparently for the pleasure of struction, while they have indulged their age instincts by illtreating women and ildren.

It is therefore necessary to wait until the ablishment of peace in order to develop the untry's resources.

But Mr. Asquith has pledged his word that ace shall not be restored until Belgium has en repaid all that she has lost during the ır, and said that she shall not suffer by the t that she had to withstand the brunt of rman aggression.

Belgium hopes that the Germans will have pay an indemnity for the damage done, and e industry of the population is sufficiently ll known to make us believe that financial ans will be found to carry out necessary rks.

The determination of the Belgian people to onstruct the nation's fortunes by independent tion has been recognised by the members of e Belgian Town Planning Congress.

At a meeting in November, 1915, it was reed that whatever was done should be done Belgians for Belgium.

Some proposals were excepted from this oad rule, and at the meeting a proposal ich had already received the approval of e Belgian Minister of Agriculture and Public orks was that a city or town should be tirely reconstructed out of international nds to form a memorial of the respect of e Allies for the part played by Belgium in e war.

This proposal has created enthusiasm and lights the pride of the people, but the great jority of them, having the choice of a autiful offering on the one hand or the storation by subscription and effort of the brary of Louvain, the monuments of Ypres d Nieuport, and the Cathedral of Dinant, would efer the last alternative, for in every country emorials will be built which will eloquently call the fraternity of the allied nations, eir aims and ideals, and the end of their eat trial. This sentiment is felt in France d Belgium, and we read in the *Builder* of ecember 3 last that the General Purposes mmittee of the London County Council knowledged the receipt of a letter from the yal Academy stating that at the instance the Institute of France the Academy have pressed their willingness to initiate a proposal the formation of a British Committee to sist in the restoration of the Library of uvain, and invite the Council to nominate delegate or delegates to serve on the Committee, d the London County Council agrees to point Major Ernest Grey and Mr. Andrew ylor to represent the Council on this mmittee.

We hope to see the monuments which have en the ornament and pride of our cities stored, though we also think of the commercial erests of the people after the restoration of ace.

Ought we to be disturbed as to the financial sition which will accompany the restoration this peace? We do not believe that in ming conferences on economical questions tween financiers and politicians the states- n of the allied Powers will fail to take adequate steps to hinder neutrals who have enjoyed peace while we have been engaged in the struggle to secure the rights of humanity, reaping the fruits of that peace to our disadvantage, but we believe it will be necessary in our common interests to impose a prohibitive tariff on their productions.

It will thus be necessary for them to use the millions gained at our expense during the war in investing them in our finances and industries. Such questions were doubtless discussed at the meetings which have taken place, and we have confidence that when peace comes the authorities will have made arrangements which will lead to the realisation of the ends we have indicated.

Charles Petein (Captain).

NEW GOVERNMENT CONTRACTS.

War Office.

Barrows.—Acme Patent Ladder Company, 364, Garratt-lane, Earlsfield, S.W.; Baltic Saw Mills Company, Ltd., Goods Station-road, Tunbridge Wells; J. Boys & Son, Ltd., Junction Saw Mills, Walsall; R. Butler & Sons, Saw Mills, Hailsham; C. R. Claridge, The Basin, Exeter; Davies & Pryer, Ltd., West Dock, Collingdon-road, Cardiff; M. Finch & Son, 17, Mersey-street, Liverpool; C. Jenkins & Son, Porth, Rhondda Valley, Glam.; Lunn Bros., Brockenhurst, Hants; Newport Ladder and Barrow Company, 4, Caerleon-road, Newport, Mon.; C. R. Pettit & Son, Bridge-street, Thrapston, Northants; H. C. Philcox, Ltd., 113A, Acre-lane, Brixton, S.W.; W. J. Philpott, 131, Waddon New-road, Croydon; Pool & Sons, High-street, Hartley Wintney, Winchfield, Hants; W. Stenning & Sons, Brighton-road, Redhill; H. C. Tofts, Hingham, Attleborough; F. Watters, 58, Harrow-road, W.; J. H. Williams & Co., 26, Kiddrow-lane, Burnley.

Boards and Trestles.—West of England Joinery Company, Ltd., Newport-street, Stonehouse, Plymouth.

Bolts and Nuts.—Bayliss, Jones, & Bayliss, Wolverhampton; G. Cooper & Sons (Sheffield), Ltd., Effingham-road, Sheffield; F. W. Cotterill, Ltd., Atlan Works, Darlaston; J. Gadd & Sons, Ltd., Blackheath, Birmingham; Horton & Sons, Ltd., New Alma Works, Darlaston; T. Pittaway & Sons, Blackheath, Birmingham; J. C. Prestwich, Ltd., Atherton, Manchester; J. Wiley & Sons, Ltd., Eagle Works, Darlaston; Wilkes, Ltd., Grand Junction Works, Darlaston; W. M. Winn & Co., Station Works, Darlaston, Wednesbury.

Cement.—Associated Portland Cement Manufacturers, Ltd., Northfleet, etc.

Chests.—F. R. Martin & Co., Manor-road Works, Streatham Common, S.W.

Conduits and Fittings.—Simplex Conduits, Ltd., Garrison-lane, Birmingham.

Cranes.—Butters Bros. & Co., Ltd., Maclellan-street, Glasgow; Ransomes & Rapier, Ltd., 32, Victoria-street, S.W.; T. Smith & Sons, Rodley, near Leeds.

Fabric, Steel Wire.—British Reinforced Concrete Company, Ltd., 1, Dickinson-street, Manchester.

Machines, Tar-Spraying.—Phœnix Engineering Company, Ltd., Chard, Somerset.

Mixer, Concrete, and Accessories.—Winget, Ltd., 25, Victoria-street, Westminster, S.W.

Paint.—L. Berger & Sons, Ltd., Homerton, N.E.; Crown Compositions Company, South Dock, Swansea; N. J. Fenner & H. B. Alder & Co., Ltd., Fenner's Wharf, Millwall, E.; Goodlass, Wall, & Co., 42, Seel-street, Liverpool; J. Hare & Co., Temple Gate, Bristol; Pilchers, Ltd., Morgan's-lane, Tooley-street, S.E.

Paint (Term Contract).—Meredith & Co., Western-road, Birmingham.

Pile-Driving Plant.—British Steel Piling Company, Dock House, Billiter-street, E.C.

Piping and Fittings, Metal.—Scottish Tube Company, Glasgow; Smith, Ltd., Brunswick Tube Works, Wednesbury; Stewarts & Lloyds, Ltd., 41, Oswald-street, Glasgow.

Pumps.—Beck & Co., 130, Gt. Suffolk-street, S.E.; J. Evans & Sons (Wolverhampton), Ltd., Culwell Works, Wolverhampton; Guthrie, Allsebrook, & Co., Artesian Works, Crown-street, Reading; Gwynnes, Ltd., Hammersmith Iron Works, London, W.; Holman Bros., Ltd., Camborne, Cornwall; Lee, Howl, & Co., Ltd., Tipton Engineering Works, Staffs; Rees Roturbo Manufacturing Company, Wolverhampton.

Roofing.—Ruberoid Company, Ltd., Ruberoid Works, Enfield Highway, N.

Steel, Construction.—J. Butler & Co., Ltd., Stanningley Iron Works, Leeds; Dorman, Long, & Co., Ltd., Middlesbrough.

Tools.—Alldays & Onions Pneumatic Engineering Company, Ltd., Birmingham; C. A. Argyle & Co., 5, West-hill-lane, Sheffield; Sir W. G. Armstrong, Whitworth, & Co., Ltd., Elswick Works, Newcastle-on-Tyne; W. G. Birkinshaw & Co., Reliance Works, Wolverhampton; C. H. Blakeley & Sons, 165, Napier-street, Sheffield; F. J. Brindley & Sons, River-lane, Sheffield; H. Brindley, 298, Summer-lane, Birmingham; British Plier Company, Ltd., Statham, Lymm, Warrington; S. Cassell & Sons, Lombard-street, Birmingham; Chater Lea, Ltd., 74/84, Banner-street, E.C.; Drummond Bros., Ltd., Ryde's-hill, near Guildford; Easterbrook, Allcard, & Co., Ltd., Albert Works, Sheffield; B. Fiddian & Son, Albion Works, Stourbridge; Flather & Sons, Solly-street, Sheffield; W. Gilpin, Sen., & Co., Ltd., Churchbridge, Cannock, Staffs; W. Hall (Sheffield), Ltd., Alma Works, Sheffield; Hand & Co., Ltd., 57/9, Snow-lane, Sheffield; Hardy Patent Pick Company, Ltd., Sheffield; J. Keeves & Sons, Ltd., Boundary-street, Shoreditch, E.; Lancashire Tool Company, Henry-street, Lymm, Cheshire; J. Lyon, Holt-lane, Rainhill; R. Marples & Son, Aizlewood-road, Sheffield; W. Marples & Sons, Ltd., Hibernia Works, Sheffield; R. Mather & Son, Shoreham-street Works, Sheffield; I. Nash & Sons, Ltd., Wollaston Mills, Stourbridge; W. Park & Co., Wigan; Payne & Co., 84/6, Park-street, Southwark, S.E.; J. Peace & Co., Ltd., Rutland-road, Sheffield; F. G. Pearson & Co., Hope Works, Sheffield; Perkin, Macintosh Petroleum Tool and Boring Company, Ltd., St. Albans, Herts; J. Potts & Son, Old Hill, Staffs; T. Ross & Son, 501, Broadstone, Bloxwich, Walsall; Rowland, Brindley, & Co., Bramall-lane Sheffield; T. Smith & Sons, of Saltley, Ltd., Saltley Mills, Birmingham; Stalker Drill Works, Ltd., Drill-square, Sheffield; G. Steadman, Union Works, Lupin-street, Birmingham; J. H. Swift & Sons, Ltd., Penistone-road, Sheffield; C. Taylor's Sheffield Tools, Ltd., Bishop-street, Sheffield; R. Thomas (Birmingham, 1908), Ltd., Icknield-square, Birmingham; W. A. Timperley, Prospect-road, Heeley, Sheffield; J. Tyzack & Son, Ltd., Valley-road, Heeley, Sheffield; T. Wales & Sons, Ltd., Midland Works, Queen's-road, Sheffield; Ward & Payne, Ecclesfield; Whitehouse Bros., Ltd., Cannock, Staffs; C. Whitehouse & Sons, Ltd., Cannock, Staffs; Wolseley Sheep Shearing Machine Company, Ltd., Alma-street, Birmingham; F. Wood & Son, Henry-street, Sheffield; J. Yates & Co., Ltd., Aston Manor, Birmingham.

Works Services.—Conversion of barracks into hospital buildings at Shorncliffe: L. T. Dadds, Canterbury; drainage at Canterbury, etc.: G. Browning, St. George's-place, Canterbury; drainage and water supply at Eastbourne: Walles & Co., 14, Seaside-road, Eastbourne; drainage at Holyport: Collier & Catley, Ltd., St. Mary's Butt, Reading; drainage at Usworth: S. F. Davidson, 16, Ridley-villas, Newcastle-on-Tyne; drainage at West Boldon: Wm. Wilson & Co. (Newcastle), Ltd., Ponteland, Newcastle-on-Tyne; drainage at Wyton: Clark & Sons, Newmarket-road, Cambridge; electric-light installation at Cramlington: Robson & Coleman, Haymarket-lane, Newcastle-on-Tyne; electric-light installation at Lilbourne: G. Weston & Sons, 153, Fenchurch-street, E.C.; electric-light installation at London Colney: Tredegars, Ltd., 7, Brook-street, W.; engineer services at Horton: S. F. Davidson, 16, Ridley-villas, Newcastle-on-Tyne; sewage disposal works at Canterbury, etc.; G. Browning, St. George's-place, Canterbury; sundry works services at Woolwich: W. F. Blay, Ltd., Spital-street, Dartford; water supply at Leybourne: A. Tye, Tubbs-hill, Sevenoaks; water supply at Wyton: the Borough Surveyor, Huntingdon.

Erection of camp structures at Chelmsford: H. Potter, Fairfield Works, Chelmsford; extensions at huts, Farnborough: Crosby & Co., Ltd., South-street, Farnham, Surrey; extension to offices at York: A. Robinson, Woodbine Works, Idle, Bradford; huts at Eastbourne: Miller & Selmes, 75, Tideswell-road, Eastbourne; Peerless, Dennis, & Co., 56, Grove-road, Eastbourne; huts at Edinburgh: Wm. Finlayson & Sons, Balfour-street, Leith; huts at Grangemouth: Wm. Finlayson & Sons, Balfour-street, Leith; huts at Polmont: Wm. Finlayson & Sons, Balfour-street, Leith; huts at Southampton: E. & A. Sprigings, Stamshaw, Portsmouth; huts at Wimbledon Common; C. P. Roberts & Co., Ltd., Tyssen-street, Dalston; institute at Dover: Hayward & Paramor, Castle-avenue, Dover; machinery and plant for power house, Milton: R. Garret & Sons, Ltd., 170, St. Stephen's House, S.W.; British Westinghouse Electric and Manufacturing Company, Ltd., Trafford Park, Manchester; the D.P. Battery Company, Ltd., Bakewell, Derbyshire; sheds at Bramham Moor: J. Gerrard & Sons, Ltd., Swinton, Manchester; sheds at Narborough: Wm. Harbrow, Ltd., South Bermondsey, S.E.; sheds at Raplock: F. D. Cowieson & Co., Charles-street, St. Rollox, Glasgow; sheds at Sedgeford: Wm. Harbrow, Ltd., South Bermondsey, S.E.; steel buildings at Tarring Neville: Geo. Sands & Son, Ltd., Colwick, Nottingham; provision of cement flooring at South Farnborough: Crosby & Co., Ltd., South-street, Farnham, Surrey; renewal of roadway at Woolwich: H. Sabey & Co., 7 and 8, South Wharf, Paddington.

India Office: Store Department.

Cable.—Callender's Cable, etc., Company, Hamilton House, Victoria Embankment, E.C.: W. T. Glover & Co., Trafford Park, Manchester.

Paint (Running Contract).—Silicate Paint Company, Charlton.

H.M. Office of Works.

Building Works, etc.—Chelsea Hospital, erection of Army Pensions Staff building in grounds: James Smith & Sons (Norwood), Ltd., Junction Works, South Norwood, S.E. Gun and searchlight stations, repairs, alterations, etc.: Leslie & Co., Ltd., Kensington-square, W.; Higgs & Hill, Ltd., Ltd., Crown Works, South Lambeth, S.W. Horse Guards, Whitehall, alterations: George Trollope & Sons and Colls & Sons, Ltd., 77, Grosvenor-road, S.W. Kensington Palace-gardens, erection of temporary military hospital: Thomas & Edge, Anglesea-avenue, Woolwich, S.E. New public offices, non-slip stone paving and granite curb: John Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W. Ordinary works and repairs to buildings in the following districts to June 30, 1917:—Forest Hill and Sydenham, S.E.: E. C. Christmas, 55, Dartmouth-road, Forest Hill, S.E. Portsmouth: S. Salter, York-street, St. Paul's-road, Southsea. Whitehall Gardens, erection of temporary buildings: Holloway Bros. (London), Ltd., Bridge Wharf, Grosvenor-road, S.W.

Engineering Works, etc.—Military hospital, Kensington Palace-gardens, heating: W. G. Cannon & Sons, Ltd., 107, London-road, Southwark, S.E.

Miscellaneous.—Cast-iron chimney-pieces to May 31, 1917: Smith & Wellstood, Ltd., 11, Ludgate-circus, E.C.

PARISH CHURCH, HULL.

The Archbishop of York recently consecrated the new parish church of St. Mary, Sculcoates. The new church takes the place of an old one, which has been demolished, and has been designed by Mr. Temple Moore, architect, of London. There is at present accommodation for 600 people, and this will be increased to 800 when the western part of the structure is completed. The cost of the work already done is over £5,800.

BUILDING MATERIALS FOR BRITISH INDIA.

The Officiating Director-General of Commercial Intelligence at Calcutta reports that a local firm is interested, as importers of building materials, in building and decorative specialities, such as porcelain tiles, stamped metal ceilings, collapsible gates, etc. United Kingdom manufacturers of the goods mentioned, and exporters of United Kingdom goods, desirous of doing business in India, may obtain the name and address of the firm referred to, and of the firm's shipping agents in London, on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C. In making application the reference number (185) should be quoted.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

Aberdeen.—The Burgh Surveyor has been instructed to have the work carried out in connection with the installation of hot-water apparatus for the refreshment-rooms at the bathing station. Plans for the following buildings have been approved by the Plans Committee of the Aberdeen T.C.:—Two dwelling-houses, Rosebery-street, for Messrs. J. Shirras & Son, builders, per Mr. George Watt, architect; additions to engineering works at No. 80, Spring-garden, for Messrs. William M'Kinnon & Co., Ltd., engineers; additions and alterations in connection with premises, Hutcheon-street, for the Aberdeen Comb Works Company, Ltd., per Mr. William S. Boice, engineer (amended plan). The Public Health Committee of the Aberdeen T.C. has agreed to the application of Messrs. William Murray & Son, hide and tallow manufacturers, for the approval of the extension of their premises in George-street.

Aldershot.—The D.C. has instructed their Surveyor to prepare a specification for painting the old buildings at the Isolation Hospital, and the provision of two porcelain baths, and to invite tenders for the work.

Australia.—The Sydney Office of H.M. Trade Commissioner for Australia reports that the estimates submitted by the Commonwealth Treasurer to the House of Representatives include the following votes for additional works to be carried out, mostly in New South Wales:—Sydney Customs House, £5,000 (the total estimated cost of this undertaking is £30,000); Spectacle Island Naval Establishment, £6,204; Jervis Bay Naval College, £30,000; Lithgow Small Arms Factory, £30,800; Canberra Arsenal, £20,000; Post Offices, Stores, and Telephone Exchange in Sydney, £7,676; and Cockatoo Island Dockyard, £100,000.

Barnes.—Plans passed by the D.C.:—Convenience, Mortlake Garage, London General Omnibus Company, Ltd., and alterations to mess-room, etc., Mortlake Garage, London General Omnibus Company.

Birmingham.—It is proposed to present to the Young Men's Christian Association a hut bearing the name of Birmingham, and an appeal is made for funds towards the cost and equipment. The hut is estimated to cost £450.

Brazil.—The Directorate of Public Works of the State of Rio Grande do Sul has called for tenders for the construction of quays at the port of Porto Alegre. 600 metres of quay wall are to be built, the cost of which is calculated by the Directorate of Public Works at 1,534,158 milreis (about £78,800).

Cambuskenneth.—At a recent meeting of Stirling Central District Committee it was reported that the Executive Committee had examined plans for the erection of twelve houses at Cambuskenneth for the Cambuskenneth Building Company. It was recommended that the plans be approved subject to certain alterations. The plans were remitted to the North of the Forth Committee, with powers.

Chatham.—The T.C. has approved a plan of alterations to No. 27, Mills-terrace, for Mr. H. S. Bow.

Derry.—A scheme is now on foot for a considerable extension of the Foyle Shipyard, owned by the North of Ireland Shipbuilding Company, Ltd. It is understood that the company are about to acquire a large area of property adjoining the shipyard for £10,000, the intention being to erect shipyard workers' houses. The first building scheme will provide for the erection of 200 houses, as well as villa residences for the managers.

Dorking.—The U.D.C. have asked Messrs. J. W. Gray & Co., steeplejacks, to submit an estimate for carrying out the work of repairs to the destructor chimney shaft.

Goole.—The U.D.C. has approved a plan for alterations to Grove Cottage, Old Goole, for the Aire and Calder Navigation.

Grimsby.—The T.C. has approved a scheme for the extension of the fire station at a cost of £463 14s.

Hornsey.—Plans passed by the T.C.:—For alterations to the National Hall, High-street, Hornsey, by Mr. John Farrer; and for alteration of "South View," Alexandra Park-road, Muswell Hill, into a Voluntary Aid Detachment Hospital, together with additional mess-rooms and lavatories, by Mr. J. H. Taylor, of Church-end, Finchley.

Hythe.—At a recent meeting of the Works Committee the Borough Surveyor produced a block plan of the Y.M.C.A. hut proposed to be erected in Prospect-road, and the commi recommended that it be approved of.

Mansfield.—The T.C. has approved the foll ing plans:—Mr. C. H. Hill, additions to ho Ashfield-avenue; Dr. Elder, additions to ho Woodhouse-road; Mr. W. Draper, house, Car lane (building in Town-planning Area No. 1

Meriden.—The Guardians have agreed to provision of improved sanitary accommodat in the women's casualty ward.

Newmarket.—At a recent meeting of U.D.C. Mr. A. S. Manning submitted, on bel of Messrs. R. J. Maris, Ltd., plans for a sample room at the back of the firm's office All Saints'-road. The Council granted mission for the room to be erected as temporary building.

Ossett.—The T.C. has approved plans fo wood shed at Highfield Mill, for Messrs. Wal Walker & Sons, Ltd.

Richmond (Surrey).—Plans passed by Corporation:—Mr. K. D. Young, addition to "Compasses" public-house, Petersham-ro Messrs. Yetts, Sturdy, & Usher, addition to "Fox and Duck" public-house, Petersha Messrs. Brewer, Smith, & Brewer addition No. 5, Lower George-street.

Salford.—The Salford E.C. has appointed committee to consider the question of provid a temporary open-air school in the David Le Recreation Ground, Peel Park.

Sheerness.—The Council has approved amended plan of the Cinema Theatre in Russ street.

Southam.—The R.D.C. has approved a p for a proposed cottage, the property of L Willoughby de Broke, at Old Leys Fa Burton Dassett.

Southend.—Plans passed by the T.C. Alterations and additions to church, Marguer drive and Leigh-road, trustees of Leigh-r Baptist Church; alterations and additio "Benghazi," Drake-road, Mrs. H. W. Hob alterations and additions, "Stuart Hous Trinity-avenue, Mr. C. Mackay; alterations additions, "Southview Cottage," 627, Lond road, Mr. C. Poulden; conversion of house i flats, "Ben Rhydding," Cliff-road, Mr. Hunt; bungalow, London-road, Leigh, M Amelia Hansford.

West Lancashire.—The Council has appro the following plans:—Kitchen and pan Smithy-lane, Rufford, for Mr. Pilkington; shippon and dairy, Marsh-lane, Hesketh Ba for Mr. W. H. Stevenson; washhouse, Plex-la Halsall, for Mr. Thos. Shacklady; alteration house, Hesketh-lane, Tarleton, for Mr. J Smith; piggeries, Ralph's Wife's-lane, Ba for Mr. J. Houghton; and redrainage of Sch View, Lydiate, for Mr. T. Sephton.

Woking.—The following plans have b approved by the U.D.C.:—Woking Gas C pany, addition at their works, Boundary-ro Miss Ellis, addition to Gower, Claremo avenue: Martinsyde, Ltd., new latrines to fitt shop, Oriental-road.

TRADE NEWS.

Boyle's latest patent "air-pump" ve lators have been applied to Goldthorpe N Church, Goldthorpe.

The Milton Infectious Diseases Hospi Portsmouth, is being supplied with Shorlan double-fronted warm-air ventilating pat Manchester Hospital stoves by Messrs. E. Shorland & Brother, Ltd., of Failswor Manchester.

We are informed that the executive engin of the Dacca (India) University Division expressed his satisfaction with the cem damp-courses used in the New Secretariat the new Mahommedan College at Dacca. understand that Pudlo was used in b structures to waterproof the cement.

NEW COMPANIES.

The undermentioned particulars of companies recently registered are taken f the Daily Register compiled by Messrs. Jor & Sons, Ltd., Company Registration Age Chancery-lane, W.C.:—

W. A. Taylor, Ltd. (143,985). Registe May 30. To carry on business of manufactu of munitions of war, mechanical engine boiler makers, ironfounders, millwrig manufacturers of machinery, tool mak engineers, gas makers, and water sup engineers, builders, painters, brass found metal workers, etc. Nominal capital, £2,00 1,700 £1 Founders' shares and 300 £1 Ordin shares.

Nicholas Green & Payne, Ltd. (143,9 2, Vale-road, Bushey, Herts. Registered 31. To acquire the business now carried under the name of Nicholas Green & at Vale-road, Bushey, and to enter into agreement. To carry on business of join manufacturers, builders, carpenters, un takers, cabinet makers, etc. Nominal capi

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* See also our list of Competitions, Contracts, etc., on page 480.

)00 in 3,000 £1 7 per cent. participating ference shares and 2,000 £1 Ordinary shares.

Regent Shears, Ltd. (144,000). Regis- ed June 1. To carry on business of manu- urers and suppliers of sheet metal, work- machinery, press tools, stamping dies, gings, etc., and general machine tool engin- rs and merchants, iron founders, tool makers, chinists, iron and steel converters, builders, nters, metallurgists, water supply engineers, workers, carriers. Nominal capital, £2,000 2,000 £1 shares.

K. Ford & Weston, Ltd. (144,009), Osmaston-road, Derby. Registered ne 2. To acquire and carry on the business builders and contractors now carried on by K. Ford at Osmaston-road, Derby, under style of J. K. Ford and by R. Weston and R. Weston at Leacroft-road, Derby, under style of Richard Weston & Sons. To nufacture bricks, tiles, pipes, etc. Nominal oital, £15,000 in 2,500 £1 Preference shares d 12,500 £1 Ordinary shares.

G. W. Riley, Ltd. (144,058), Norwood- d, Herne Hill, S.E. Registered June 9. acquire the business now carried on at rne Hill under the style or firm of G. W. Riley, d to carry on business as timber merchants, ilders, manufacturers, shipowners, saw-mills oprietors, etc. Nominal capital, £10,000 in 000 £1 Ordinary shares.

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LAW REPORT.

Official Referee's Court.
(Before Mr. Muir Mackenzie.)

Claim for Building Picture Palace:
lson Rae, Pixton, & Co., Ltd. v. Laycock.

In this action, the hearing of which occupied arly a week, Messrs. Wilson Rae, Pixton, Co., Ltd., builders, of Queen Victoria-street, C., sought to recover from Mr. Horace Scott ycock, of Great St. Helens, E.C., £546, lance of charge for converting Brixton Hall, re-lane, Brixton, into a picture palace. The fendant pleaded that the work was not in cordance with the contract, and counter- imed damages for breach of contract and lay in completing the work.

The Official Referee, in giving judgment, id that the first operative clause in the agree- ent, which was in writing, and was signed the managing director of the plaintiff mpany, was to the effect that the contract ould be carried out forthwith and with the most expedition to the satisfaction of the C.C. and the local authorities; but there s nothing in the contract which bound the aintiffs to complete by a certain date. He und that no verbal agreement to that effect d been proved, and that the plaintiffs did t know, as alleged, that the completion of e work by July 28 was necessary for the fendant's enterprise. There had been no each of contract by reason of delay. The xt issue was whether the work had been ne in accordance with the contract. The aintiffs, having substantially done the work, re entitled to the price. The defendant, wever, had made a long list of items which, said, had not been done in accordance with e specifications, the total of which amounted £309. The evidence as to this had been ry conflicting. Mr. Appleton, a surveyor, d a number of workmen had been called by e plaintiffs to say that the work had been operly done, and Mr. Stevens, a surveyor, d other workmen were called for the defence say that the materials were bad, and that e work was not in accordance with the speci- ations. As a result he found that the work d been done in such a way as to satisfy all asonable requirements. The defendant was titled, however, to certain allowances, nounting in all to £65 6s. 10d., and there as a claim by him for doors, gates, and her things which plaintiffs had taken away, though they had no right to do so. Builders d no right to remove property and take it r their own use. Property belonging to the fendant had been so removed, but defendant d put an exaggerated value upon it. He und the value of the things so taken to be 20. The counterclaim for damages had iled, and on an adjustment of the figures he und that the plaintiffs were entitled to 475 7s. 2d., and for that amount he gave dgment with costs. Judgment would be ven for costs of the action and counter- aim, as, in his opinion, the reduction had t affected the action.

Judgment was entered accordingly.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

—	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9½	9½	9½	9½	9½	9	8	6½	6½	6½
Accrington	10	10	10	9½	9	9	9¼	6½	6½	6½
Altrincham	9½	10½	11	10	8½	10	10	6½	7½	7
Ashton-under-Lyne	11	11	10½	10½	9	10	10	7	7	7½
Barnsley	9½	9½	9½	9½	9	9½	8½	7½	7½	7½
Barrow-in-Furness	9¾	10	9¾	9¾	9¾	9¾	9¼	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	9	8½	8	9	6½	5½	5½	6
Birkenhead	1/-	1/-	1/-	11	11	1/-	9½	8	8	8
Birmingham	11½	11½	11½	11½	10½	11¾	10¼	8½	8½	8½
Bishop Auckland	9	9	9	9½	10‡	9	8	6½	6½	7½
Blackburn	10	10½	10	10	9½	10	9¼	7	7¾	7¾
Blackpool	11	9½	9½	9½	8½	9½	9¼	6	6	6
Bolton	10½	11	10½	10½	10	10†	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6¾	6¾	6¾
Bradford	10½	10½	10	9½	10	10	9½	8	8	8
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	9	9	9	—	9	7½	6½	6½	6½
Bristol	10½	10½	10½	10½	—	10½	9½	8	8	8
Burnley	10	10½	9½	9½	8	9½	9¼	7	7	7½
Burton-on-Trent	9½	9½	9½	10	9	9½	8¾	7	7	7
Bury	11	11	10½	9	10	10½	10	7	7½	7½
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	9¾	9¾	9¾	9¾	—	9¾	9¼	6½*	6½*	6½*
Chester	9½	10	10	9¾	9¾	10¼	9¼	6½	7	6½
Chesterfield	9	9½	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	11	11	10¼	11	11	10	8½	8½	9
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	9	7	7	7
Derby	9½	10	9½	9	9	9½	8	7	7	7½
Doncaster	9½	9½	9½	9½	9½	9	8	6¾	6¾	7½
Dudley	8½	10	10	8½	8¼	8	7½	6½	6½	6½
Durham	9½	9½	9½	9½	10	9	8½	6½	6½	7
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8½	8½	7½	7½	7½	5½	5½	5½
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9½	9½	9	9	8½	7	7	8
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	9½	9	9	9	9¼	7	7	7
Harrogate	9½	9½	9½	9	8	9½	8½	6½	6½	6½
Hartlepools	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7¾	8½	8	7	7	5¼	5¼	5¼
Huddersfield	11	11	10½	9½	10	9	8½	7½	7½	7½
Hull	10¾	10½	10½	10½	10½	10	9	8½	8½	8½
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9½	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6¾	6¾	6¾
Leeds	10¾	10¾	10¼	10½	10½	11	9	8	8	8½
Leicester	10½	10½	10½	10½	11	10½	9	8	8	8½
Lincoln	9	9½	9½	9	8½	8½	8	6	5½	6½
Liverpool	1/-	1/-	1/-	11	11½	1/-	10½	8	8	8
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1/-	9	8	8	8
Loughborough	9	8½	9	9	9	8½	8½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	10½	7½	7½	7½
Mansfield	8½	10	9½	8½	—	9½	9	7	7	7
Merthyr Tydfil	9½	9½	9½	9½	9½	9	8½	6½	6½	6½
Middlesbrough	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10½	10	7¾	7¾	7¾
Newport, Mon.	10	10	10	10	8½	10	9½	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	11	11	11	10½	10½	11	10	8½	8½	9
Oldham	11	11	11	10	9	10	9½	7½	7½	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9*	9*	9*	9*	9	9*	8½	6½*	6½*	6½*
Pontypridd	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Portsmouth	9½‡	9½‡	9½‡	9½‡	9½	8½‡	7½	7‡	7‡	7‡
Preston	10¼	10½	10	9¾	9½	10	9½	6	7	7¼
Reading	9	9	9	9½	—	9	7½	6*	6*	6*
Rochdale	10½	10½	10½	10	9¼	10	9½	7½	7½	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	10	10	10	10¼	8¾	10	9	6¾	6¾	6¾
St. Albans	9	9	9	9–10	9	9–10	8	7	7	7
St. Helens	9	9¾	10†	9¾	9¾	9½	10¼	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	10†	10¼	9½	10	10	9	7¼	7¼	7¼
Shrewsbury	8½	9¼	9¼	9½	—	8½	7	6¼	6¼	6¼
Southampton	9¼	10¼	10¼	9¼	—	10¼	9¼	7¾	7¾	7¾
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	10½	9½	9½	10	9½	6½	7	7
South Shields	11	11	11	11	10	10½	10	7¾	7¾	7¾
Stockport	11	10½	10½	10½	9½	10	9¾	6½	7	7¼
Stockton-on-Tees	10	10½	10¼	10½	10‡	10½	9	7½	7½	8
Stoke-on-Trent	9	9¼	9	9	—	8½	8¼	6	6	—
Stroud	8	8	8	8	7½	7½	7½	6	6	6
Sunderland	11	11	10½	11	10‡	9½	9½	7½	7½	7½
Swansea	10½	10½	10½	10½	10½	9	10	7½	7½	7½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	9	7	7	7
Walsall	10	9½	9½	9½	8½	10	8¼	7¼	7¼	7¼
Warrington	8¾	10½	10¼	10½	8½	10¼	9¼	6¾	6¾	6¾
West Bromwich	10½	10½	10	10¼	—	9½	8	7½	7½	7½
Wigan	10½	11	10	10	9½	10¼	9¼	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	10½	10½	10½	11	8	10	9	7½	7½	7½
Worcester	8½	9½	9½	9½	9	9½	8	6½	6½	6½
York	9¾	9¾	9½	9½	10	9½	8½	7	7	7

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 2s. 6d. per week granted.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number**: Competitions, —; Contracts, iv.; Public Appointments, xxii.; Auction Sales, xxiv. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

June 30.—**Barrow-in-Furness.**—Painting.—The Corporation invite tenders for repainting the iron and steel work of the Walney Bridge. Quantities, etc., from the Borough Engineer.

June 30. — **Cannock.** — Repairs, etc. — For repairs to and painting of the interior and exterior of the Council Offices and other buildings for the U.D.C. Specification, etc., of Mr. Robt. Blanchard, Engineer and Surveyor, Council Offices, Cannock.

June 30.—**Fife.**—Mason Work, etc.—For the mason, carpenter, slater, and (plaster work of No. 5) at the following places:—(1) Farm offices at Whippingstone, Grange, Mr. J. Scott tenant; (2) court at Little Cantly, Grange, Mr. J. Forbes tenant; (3) barn at Crannach Smithy, Grange, Mr. D. Dempster tenant; (4) stable and man's room at Foulwood, Grange, Mr. R. Gordon tenant; (5) part farm offices at Claymires, Rothiemay, R. Simpson tenant. Plans, etc., at the above places and at the Fife Estates Office, Fife-Keith.

July 3.—**Reigate.**—Painting.—For painting St. John's (New) Council Schools (exterior only) and covered play sheds at Hooley Council School, Redhill, for the Reigate E.C. Specifications from the Borough Surveyor, Municipal Buildings, Reigate.

July 3. — **Treharris.**—Colourwashing.—For colourwashing the Central Schools, Treharris, during the school summer holidays for the E.C. Particulars from the Borough Architect, Town Hall, Merthyr Tydfil.

July 4. — **Aldershot.** — Demolition. — The U.D.C. invite tenders for the demolition of Aldershot buildings situate in Boxall's-lane, including the removal of all materials and debris from the site thereof. Specification, etc., of the Surveyor, Municipal-buildings.

July 7.—**Dewsbury.**—Engine and Boiler House, etc.—For the erection of engine and boiler house, long chimney, drying shed, etc., at Westfield Mills, Dewsbury. Plans, etc., of Messrs. Holtom & Fox, architects, Corporation-street, Dewsbury.

July 8.—**Nottingham.**—Painting.—The E.C. invites tenders for external painting at various Council schools. Also for painting and whitewashing the out-offices at various Council and Trust schools. Specifications, etc., from Mr. A. Dale, City Architect, Guildhall. Deposit, £1.

July 8.—**Queensbury.**—Painting, etc.—For painting, colourwashing, etc., to be done at Denholme, Queensbury Catherine Slack, Ambler Thorne, Chapel-lane, and Foxhill Council Schools for the Queensbury and Clayton District Sub-committee. Specifications from Mr. B. Leah, Education Office, Bingley.

July 10.—**Cavan.**—Alterations, etc.—For extensive alterations and additions to the drapery premises in Main-street, Cavan, known as James Fay's, for Mr. Peter Soden. Plans, etc., at Mr. Soden's, or of Mr. P. J. Brady, architect, Broomfield, Ballyhaise.

July 10.—**Enniskillen, etc.**—Painting.—The directors of the Great Northern Railway Company (Ireland) invite tenders for the following:—Cleaning and painting of seven stations between Dundalk and Enniskillen; cleaning and painting of carriage shop, Dundalk. Specifications in the Engineer's Offices at Dublin and Belfast. Copies of same and forms of tender from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin Deposit, £1 1s.

July 10.—**Flintshire.**—Painting.—The Flintshire E.C. invite tenders for the external painting of all their Council schools, forty in number, during the summer months. Specification, etc., from the County Surveyor (Mr. Sam Evans), County Offices, Mold, Flintshire.

July 10. — **Hunslet.** — Painting, etc. — The Guardians of the Poor of the Hunslet Union invite tenders for painting and other work at their children's homes at Rothwell Haigh. Forms of tender, etc., of Mr. Fred. W. Mee, Clerk to the Guardians, Union Offices, Hunslet, Leeds.

July 10.—**London.**—Decorations, etc.—For carrying out decorations and repairs at the Campsbourne Council School, Boyton-road, Hornsey, during the midsummer holidays for the Hornsey T.C. Specification at the Education Office, 206, Stapleton Hall-road, Stroud Green, N.

July 17.—**Edenderry (King's Co.).**—Hall.—For the erection of a masonic hall at Edenderry (King's Co.). Plans, etc., of Mr. Edwin Bradbury, F.R.I.A.I., architect, College Park-chambers, Nassau-street, Dublin, or at Mr. C. W. Hedyes Manners's office, Edenderry.

July 17.—**Leeds.**—Painting, etc.—For painting and cleaning of the schools during the midsummer vacation for the Leeds E.C. Specification and list of schools from the Education Department (Architect's Section), Calverley-street, Leeds.

No Date.—**Aspull.**—Reslating.—For reslating shop and pointing. Particulars of Mr. W. Byrom, 15, Smith-street, Haigh-road, Aspull.

No Date. — **Langley Mill.** — Painting.—The Nottinghamshire and Derbyshire Tramways Company invite tenders for painting tram poles. Particulars of the Manager, Car Sheds, Langley Mill.

FURNITURE, MATERIALS, etc.

June 30.—**Powick.**—Paints and Oils, etc.—Supply to the Committee of Visitors of Worcester County and City Asylum, Powick, of paints and oils, etc. Forms of tender from the Storekeeper.

July 3.—**Belfast.**—Furniture.—For furnishing twenty-five nurses' bedrooms at the Royal Victoria Hospital, Belfast. Further information of the Superintendent at the Hospital.

July 3.—**Rotherham.**—Paints, etc.—Supply to the Corporation of paints, etc. Forms of tender, etc., of the Engineer and Manager, Electricity Works, Rotherham.

July 12.—**Littlehampton.**—Granite, etc.—Supply to the U.D.C. of broken granite, broken coarse pit flints, and binding hoggin. Forms of tenders of the Council's Surveyor, Mr. H. Howard, Town Offices.

ENGINEERING, IRON, AND STEEL.

July 3.—**Leeds.**—Transformer Chambers, etc.—For the erection of two overground transformer chambers in Holbeck, and the construction of an underground transformer chamber in Hunslet, for the Electricity Department. Form of agreement, etc., of Mr. C. Nelson Hefford, Manager, 1, Whitehall-road, Leeds.

July 5. — **London.** — Boiler Seating. — The Guardians of the Poor of the Wandsworth Union invite tenders for the reseating of two Lancashire boilers at the Swaffield-road Institution, Wandsworth, S.W. Specification, etc., of Mr. F. J. Curtis, Clerk, Union Offices, St. John's-hill, Wandsworth, S.W.

July 11.—**Perth.**—Heating Installation.—The Committee of the Perth Station Hotel invite tenders for the construction of a boiler house and chimney-stack at Perth Station Hotel. Dra ings, etc., at the office of the Engineer of t Caledonian Railway, Buchanan-street Static Glasgow, and at the office of the Engineer of t Perth General Station, Perth. Deposit, £2 2

No Date. — **Littleborough.** — Heating.—T Littleborough Co-operative Society invite tende for the heating of the ground floor of the sho at the central premises, Hare Hill-road, Litt borough. Specifications, etc., at the offices of t Society, 44, Hare Hill-road, Littleborough.

* No Date.—**Shanghai.**—Heating Plant.—T Shanghai Municipal Council invite tenders f installation of heating plant in the new centr offices.

ROAD, SANITARY, AND WATER WORKS.

June 30.—**Merthyr Tydfil.**—Street Works. The Corporation invite tenders for the carryi out of private street works at Phyllis-street ar Archer-street, Troedyrhiw. Forms of tende etc., of the Borough Surveyor.

July 3.—**Bedwellty.**—Sewer, etc.—For t construction of about 175 yds. of 9-in. sewer a surface water drain at Markham Village, ne Hollybush, Mon., for the Bedwellty U.D. Drawings and specification may be seen and bil of quantities and form of tender obtained o application to Mr. Dan H. Price, Surveyor to th Council, Aberbargoed.

July 3.—**Ealing.**—Stoneware Pipes, etc.- Supply to the T.C. of stoneware pipes, et Tender forms, etc., of Mr. J. Douglas Knigh A.M.Inst.C.E., M.I.M.E., M.I.E.E., etc Borough Electrical Engineer and Manager, Ele tricity Supply Department, Town Hall, Ealin W.

July 11.—**Aldershot.**—Drainage Work.—Th Aldershot Burial Board invite tenders f executing certain drainage work at the Aldersh Cemetery. Plans, etc., of Messrs. Friend Lloyd, architects, Grosvenor-road, Aldershot.

July 19.—**Bungay.**—Granite, etc.—The U.D. invite tenders for the supply of Mountsorr granite, etc.; also for the hire of a steam roll for rolling road materials. Further particula of the Surveyor, Mr. Harry Earl.

No Date.—**Northallerton.**—Resurfacing Roa way.—The North Riding of Yorkshire C. invite tenders for the work and material in co nection with the resurfacing of about 4,750 line yds. of roadway with tarred slag macadar Plan, etc., at the County Surveyor's Offic County Hall, Northallerton.

Public Appointments.

* No Date.—Clerks of Works.—The D. R.E. invites applications for the above pos Salary 7s. 6d. per day (seven days).

Auction Sales.

* July 6.—**Clapham Park.**—Messrs. Ru worth & Brown will sell by auction, at t Mart, a double-fronted family residence.

* July 11.—**Enfield.**—Messrs. J. T. Skeldi & Co. will sell by auction, on the premises, t stock and plant of a builder and contractor.

* July 12.—Messrs. Churchill & Sim will s by auction, at the Great Hall, Winches House, Old Broad-street, E.C., an assortment deals, battens, boards, timbers, etc.

* July 18.—**Auchinblae.**—Messrs. Norbu Smith & Co. will sell by auction, at Drumtoc Castle, about 2,000,000 cubic ft. of Sco timber.

[Those with an asterisk (*) are advertised in this issue.]

RICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which evail at the present time, prices of materials ould be confirmed by inquiry.]

Lead, glass, oils, and turps have been reduced since st issue.—ED.

* Our aim in this list is to give, as far as possible, the *verage* prices of materials, not necessarily the highest r lowest. Quality and quantity obviously affect prices -a fact which should be remembered by those who ake use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£ s. d.
est Stocks	2 0 0
icked Stocks for Facings	2 12 0

Per 1000, Delivered at Railway Depôt, London.

	£ s. d.		£ s. d.
lettons	1 13 0	Best Blue Pressed Staffordshire	5 0 0
est Fareham Red	3 12 0	Do. Bullnose	5 5 0
est Red Pressed Ruabon Facing	5 5 0	Best Stourbridge Fire Bricks	4 15 0

LAZED BRICKS—

	£ s. d.		£ s. d.
est White, Ivory, and Salt Glazed Stretchers	13 7 6	D'ble Str'tch'rs	18 17 6
eaders	12 17 6	Double Headers	15 17 6
uoins, Bullnose and 4½ in. Flats	16 17 6	One Side and two Ends	19 17 6
		Two Sides and one End	20 17 6
		Splays and Squints	18 7 6

Second Quality £1 per 1,000 less than best.

	s. d.	
Thames Ballast	8 3	per yard, delivered.
Thames and Pit Sand	8 6	,, ,, ,,
Best Washed Sand	9 6	,, ,, ,,

Per ton, delivered.

	£ s. d.		£ s. d.
Best Portland Cement	2 5 0	..	2 8 0

Do. £2 1s. alongside in 80-ton lots.

Ferrocrete 2s. 6d. per ton extra on above.

Best Ground Blue Lias Lime .. 1 5 6 at rly. depôt.

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime .... 18s. 0d. per yard delivered.

Stourbridge Fireclay in s'cks 30s. 0d. per ton at rly. dpt.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1 7
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1 8¾
Do. do. delivered on road waggons, at Nine Elms Depôt	1 9¼

PORTLAND STONE—

	s. d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W.R., per ft. cube	2 5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2 6½

White basebed, 2d. per ft. cube extra.

RANDOM BLOCKS—Per Ft. Cube, delivered at Rly. Depôt.

	s. d.		s. d.
Ancaster in blocks	2 0	Closeburn Red Freestone	2 2
Beer in blocks	1 7¼	Red and White Mansfield Random block	2 9
Grinshill in blocks	2 4	Yellow Magnesian Limestone do. do.	3 3
Darley Dale in blocks	2 5		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	3 4
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 5
6 in. rubbed two sides, ditto	2 8
3 in. sawn two sides slabs (random sizes)	1 0½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 8¼
1½ in. to 2 in. ditto, ditto	0 6¾

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto	2 7
3 in. sawn two sides slabs (random sizes)	1 0
2 in. self-faced random flags	0 5

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2 12 6
Ornamental ditto	2 15 0
Hip and valley tiles (per dozen)	0 5 6

SLATES.

Per 1,000 of 1,200 f.o.r. London.

	£ s. d.
Best Blue Bangor Slates, 20 by 10	11 16 0
First quality ,, ,,	11 10 0
,, ,, 16 by 8	5 15 0
Best Blue Portmadoc, 20 by 10	11 13 6
First quality ,, ,,	11 3 6
,, ,, 16 by 8	5 15 0

WOOD

BEST BUILDING REDWOOD. Imported sizes. Nominal. Per standard.

	£ s. d.		£ s. d.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	36 0 0	..	38 0 0
3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in.	35 10 0	..	36 10 0

WOOD (*Continued*).

BEST BUILDING REDWOOD. Per standard.

	£ s. d.		£ s. d.
Battens: 2 in., 2½ in., and 3 in. by 8 in. 2 in., 2½ in., and 3 in. by 7 in. 2 in., 2½ in., and 3 in. by 6 in. Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. 3 in. by 4 in., and 3 in. by 4½ in.	33 0 0	..	34 0 0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0 10 0	more than battens.	
¾ in.	1 0 0	more than battens.	
Seconds	1 0 0	less than best	
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 10 0 0	..	—

Stocks very limited.

	£ s. d.		£ s. d.
	Per load.		
Sawn pitch pine logs (about 35 cu. ft. average)	13 0 0	..	14 0 0
Do. 6 in. to 10 in.	11 0 0	..	12 0 0
	Per standard.		
Best Pitch Pine Deals	35 0 0	..	36 0 0
Under 2 in. thick	0 10 0	extra.	

JOINERS' WOOD.

	£ s. d.		£ s. d.
White Sea First Quality Red:			
4 in. by 11 in.	43 0 0	..	44 0 0
3 in. by 11 in., and 2 in. by 11 in.	42 0 0	..	43 0 0
4 in. by 9 in.	38 0 0	..	39 0 0
3 in. by 9 in., and 2½ in. by 9 in.	37 0 0	..	38 0 0
9 in. by 11 in. boards	1 0 0	more than deals.	
7 in. and 8 in. battens	34 0 0	..	35 0 0
7 in. and 8 in. boards	1 0 0	more than battens.	
Archangel White Deals—			
Best 3 in. by 9 in. and 10 in. and 11 in.	40 0 0	..	44 0 0
Seconds, do.	2 0 0	less than best.	
U.S. Battens	31 0 0	..	33 0 0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—	Per square actual.		
1¼ in. by 6½ in. planed and shot	2 2 0	..	2 3 0
1¼ in. by 6½ in. planed and matched	2 3 0	..	2 4 0
1 in. by 6½ in. planed and shot	1 10 0	..	1 13 0
1 in. by 6½ in. planed and matched	1 11 0	..	1 12 0
¾ in. by 6½ in. planed, matched, and beaded, or V jointed	1 6 0	..	1 8 0
1 in. by 6½ in. do.	1 10 6	..	1 12 0
	Per standard.		
Columbian or Oregon Pine, best quality	42 0 0	..	44 0 0
Yellow Pine—First, regular sizes	57 0 0	upwards.	
Oddments	39 0 0	,,	
Seconds, regular sizes	43 10 0	,,	
Oddments	37 10 0	,,	
Kauri Pine—Planks per ft. cube	0 8 0	..	—
Wainscot Oak Logs, per ft. cube	0 10 6	..	0 12 6
Dry Wainscot Oak, per ft. super, as inch.	0 1 0	..	0 1 3
¾ in. do. do.	0 0 10	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 1 0	..	0 1 4
Cuba Mahogany	0 1 6	..	0 2 6
Dry Walnut, American, per ft. super, as inch	0 1 0	..	0 1 3
French, "Italian," Walnut	0 1 0	..	0 1 6
Teak, per load (Rangoon or Moulmein)	26 0 0	..	30 0 0
Do. do. (Java)	24 0 0	..	26 0 0
American Whitewood planks, per ft. cube	0 8 6	..	0 9 0

METALS.

JOISTS, GIRDERS, &c.

	In London or Railway Vans, £ s. d.		delivered per ton. £ s. d.
Rolled Steel Joists, ordinary sections, basis price	20 0 0	..	21 0 0
Plain Compound Girders, ordinary sections	22 0 0	..	23 0 0
Plain Compound Stanchions	23 0 0	..	24 10 0
Angles, Tees, and Channels, ordinary sections	20 10 0	..	21 10 0
Flitch Plates	20 10 0	..	21 10 0
Cast Iron Columns and Stanchions, plain ordinary patterns	13 10 0	..	14 0 0

(Turning extra.)

WROUGHT-IRON TUBES AND FITTINGS—

Discounts off Association Prices.

	Tubes. Per Cent.		Fittings. Per Cent.
Gas at works	55	....	57½
Water ,,	50	....	55
Steam ,,	45	....	52
Galvanised gas at works	30	....	47½
,, water ,,	23¾	....	45
,, steam ,,	17½	....	42½

Ex London 2½ per cent. less than above.

L.C.C. SOIL PIPE— London Prices.

	Pipes Coated. s. d.		Bends. s. d.		Branches. s. d.
2 in.	2 4	....	1 8	....	2 0
2½ in.	2 9	....	1 10	....	2 6
3 in.	3 5½	....	2 0	....	3 0
3½ in.	3 9¾	....	2 6	....	3 6
4 in.	4 1½	....	2 10	....	4 0

RAIN-WATER PIPES, ETC.— London Prices.

	Pipe. s. d.		Bends. s. d.		Branches. s. d.
2 in.	1 8½	....	0 11	....	1 3
2½ in.	1 10½	....	1 1	....	1 6
3 in.	2 2¼	....	1 4	....	2 0
3½ in.	2 8¼	....	1 7	....	2 4
4 in.	2 10¾	....	1 11	....	2 10

METALS (*Continued*).

L.C.C. DRAIN PIPES— London Prices.

4 in., 4s. 1d. .. 5 in., 4s. 10d. .. 6 in., 5s. 11d.

Per ton, in London.

	£ s. d.		£ s. d.
IRON—			
Common Bars	16 0 0	..	—
Staffordshire Crown Bars, good merchant quality	16 0 0	..	17 0 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	18 0 0	..	18 10 0
Steel Bars, Ferro-Concrete quality, £18 basis price.			
Hoop Iron, basis price	20 0 0	..	20 10 0
,, ,, Galvanised	33 0 0	..	—
(* And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	20 10 0	..	21 0 0
,, ,, 24 g.	21 10 0	..	22 0 0
,, ,, 26 g.	22 10 0	..	23 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	31 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	31 10 0	..	—
Ordinary sizes to 26 g.	34 0 0	..	—
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	33 0 0	..	—
,, ,, 22 g. and 24 g.	33 10 0	..	—
Ordinary sizes to 26 g.	36 10 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	29 0 0	..	—
Ordinary sizes, 22 g. & 24 g.	29 10 0	..	—
Ordinary sizes, 26 g	30 0 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	23 10 0	..	—
Best Soft Steel Sheets, 22 g. and 24 g.	23 15 0	..	—
Best Soft Steel Sheets, 26 g.	25 10 0	..	—
Cut Nails, 3 in. to 6 in.	24 0 0	..	25 0 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

	£ s. d.		
LEAD—Sheet, English, 4 lb. and up	39 0 0	..	—
Pipe in coils	39 10 0	..	—
Soil pipe	42 10 0	..	—
Compo pipe	42 10 0	..	—

NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. 6d. per cwt. extra.

		£ s. d.		
COPPER—				
Strong Sheet	per lb.	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
Copper nails	,,	0 1 6	..	—
Copper wire	,,	0 1 8	..	—
BRASS—				
Strong Sheet	,,	0 1 6	..	—
Thin ,,	,,	0 1 8	..	—
TIN—English Ingots	,,	0 1 9	..	—
SOLDER—Plumbers'	,,	0 0 10	..	—
Tinmen's	,,	0 1 1	..	—
Blowpipe	,,	0 1 3	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. fourths	4¼d.	26 oz. thirds	6½d.
,, thirds	4¾d.	32 oz. fourths	7d.
21 oz. fourths	5¼d.	,, thirds	8¼d.
,, thirds	6d.	Fluted Sheet, 15 oz.	5¾d.
26 oz. fourths	5¾d.	,, 21 oz.	6¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4d.
3/16 Rough rolled and rough cast plate	4½d.
¼ Rough rolled and rough cast plate	4¾d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic Muffled, and Rolled Cathedral white	4¾d.
Ditto, tinted	6¼d.
Rolled Sheet	4½d.

Polished Plate Glass, 15 per cent. off tariff.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 11
,, ,, ,, in barrels	,,	0 3 0
,, ,, ,, in drums	,,	0 3 3
Boiled ,, ,, in barrels	,,	0 3 2
,, ,, ,, in drums	,,	0 3 6
Turpentine in barrels	,,	0 3 5
,, in drums	,,	0 3 8
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		58 0 0
Red Lead, Dry	per ton	58 0 0
Best Linseed Oil Putty	per cwt.	0 12 0
Stockholm Tar	per barrel	4 5 0
Filocol	per cwt.	0 9 6
GENUINE WHITE LEAD PAINT—"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	70 0 0

VARNISHES, &c.

Per gallon.	£ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

AUCKLAND.—For the provision and laying of about 389 yds. of 9-in. glazed earthenware pipe sewer, and the relaying of about 244 yds. of 9-in. cast-iron pipes, for the Rural District Council. Mr. J. T. Robson, Surveyor :—

R. C. Brebner & Co.	£432
T. Hilton & Sons, Ltd.	296
W. Elliott, Bishop Auckland*	269
F. Sawerby	182

BALLYRATTEN (Ireland).—For building a sea wall at Ballyratten, Castlecarey, for the Londonderry Port Sanitary Authority (Joint Board). Mr. F. Nolan, Borough Engineer, Finmount, Moville :—

C. Bonner, Shantallan, Londonderry*	£346

BEDFORD.—For the laying of about 2 miles of 3-in. cast-iron mains, with all necessary sluice valves, hydrants, services, etc., for the Rural District Council. Mr. F. R. Chapman, Surveyor to the Council. Quantities by Surveyor :—

J. Riley	£1,638	14	1
Wilmott	1,627	3	9
"Eric" Water Main Scraping Co.	1,623	19	8
A. Hyslop	1,564	19	4
R. Brebner	1,528	0	0
Farley	1,438	16	0
Henson & Son	1,350	0	0
W. Wright	1,346	9	2
Emery & Co.	1,313	19	2
C. Ball	1,248	1	10
A. N. Coles, Ltd.	1,239	4	10
J. W. Thompson	1,189	19	9
H. C. Pullar & Co.	1,159	11	6
R. Jeakings, Bedford*	1,110	0	10

BUDLEIGH SALTERTON.—For construction of new sewer in Lansdowne-road, for the Urban District Council :—

J. C. Palmer*	£103	5

CARLOW (Ireland).—For the erection of a coal store, for the Carlow Asylum Committee :—

Carbery, Athy*	£230	10

GRIMSBY.—For extending the central fire-station, near the Town Hall, for the Fire Engine Committee. Mr. H. Gilbert Whyatt, M.Inst.C.E., Borough Engineer and Surveyor, Municipal Offices, 170, Victoria-street, Grimsby :—

Edwards & Raynor	£481	8	3
T. R. Waterman	458	0	0
G. H. Hipkin	446	12	11
Swaby & Walsham	422	0	0
Hewins & Goodhand, Ltd.	419	17	6
East & Graves	396	18	0
E. Smith	384	10	0
M. Holmes & Co.*	379	10	0

[All of Grimsby.]

WELLINGBOROUGH.—For the erection of a temporary pavilion at the Isolation Hospital, Finedon-road, Wellingborough, for the Urban District Council. Mr. R. S. Henshaw, Engineer and Surveyor, Council Offices, Market-square, Wellingborough :—

D. Rowell & Co.	£380	0	0
F. D. Cowieson & Co.	375	3	3
Humphreys, Ltd.	353	0	0
J. McManus	349	0	0
E. Brown & Son, Ltd.	334	18	0
C. Adams, Wellingborough*	280	0	0

WHITTLESEA (Cambs).—For the painting of the outside of the Workhouse and premises, for the Guardians. Messrs. J. G. Stallebrass & Sons, architects and surveyors, Peterborough. Quantities by architects :—

G. H. Clarke	£250	0	0
R. S. Jellings	218	0	0
R. H. Dearlove	197	10	0
A. Clark	192	17	10
Emery & Co.	131	0	3
J. Knight, Peterborough*	101	15	6

[The architects' estimate was £143 4s. 3d.]

WOLVERHAMPTON.—Accepted for painting and colouring at certain schools, for the Education Committee :—

Monmore Green School.			
W. Gough	£175	0	0
Higher Grade School.			
G. Greenstone	78	0	0
Special School.			
S. Hodges	74	19	0
St. John's School.			
Galleymore Bros.	68	0	0
SS. Peter and Paul School.			
W. F. Fidler	59	10	0
Technical School.			
W. F. Fidler	56	18	6
Technical School Lecture Hall.			
J. Herbert	35	0	0
All Saints' School.			
S. J. Wittingham	42	0	0
Bingley-Street School.			
T. & A. Gough	31	0	0

[All of Wolverhampton.]

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6,942 of 1915.—Athanasius Giannoussis: Trigonometrical measuring instrument.

7,390 of 1915.—David Thomas Young: Cranes.

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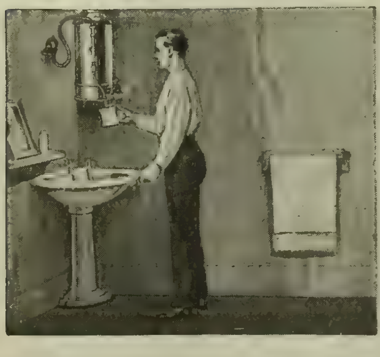

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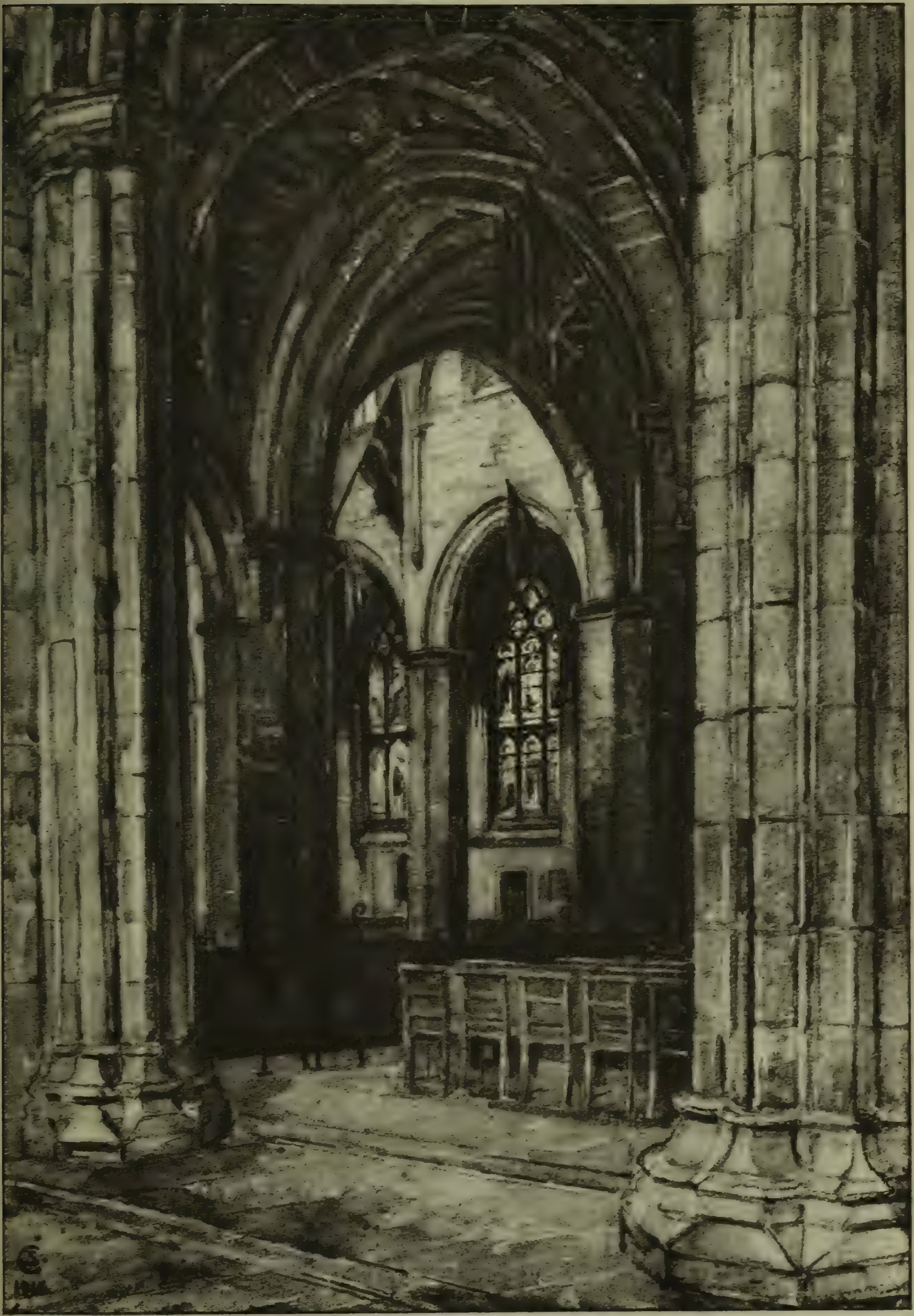

INTERIOR OF St. GILES'. EDINBURGH.—By Mr. Stewart Carmichael.

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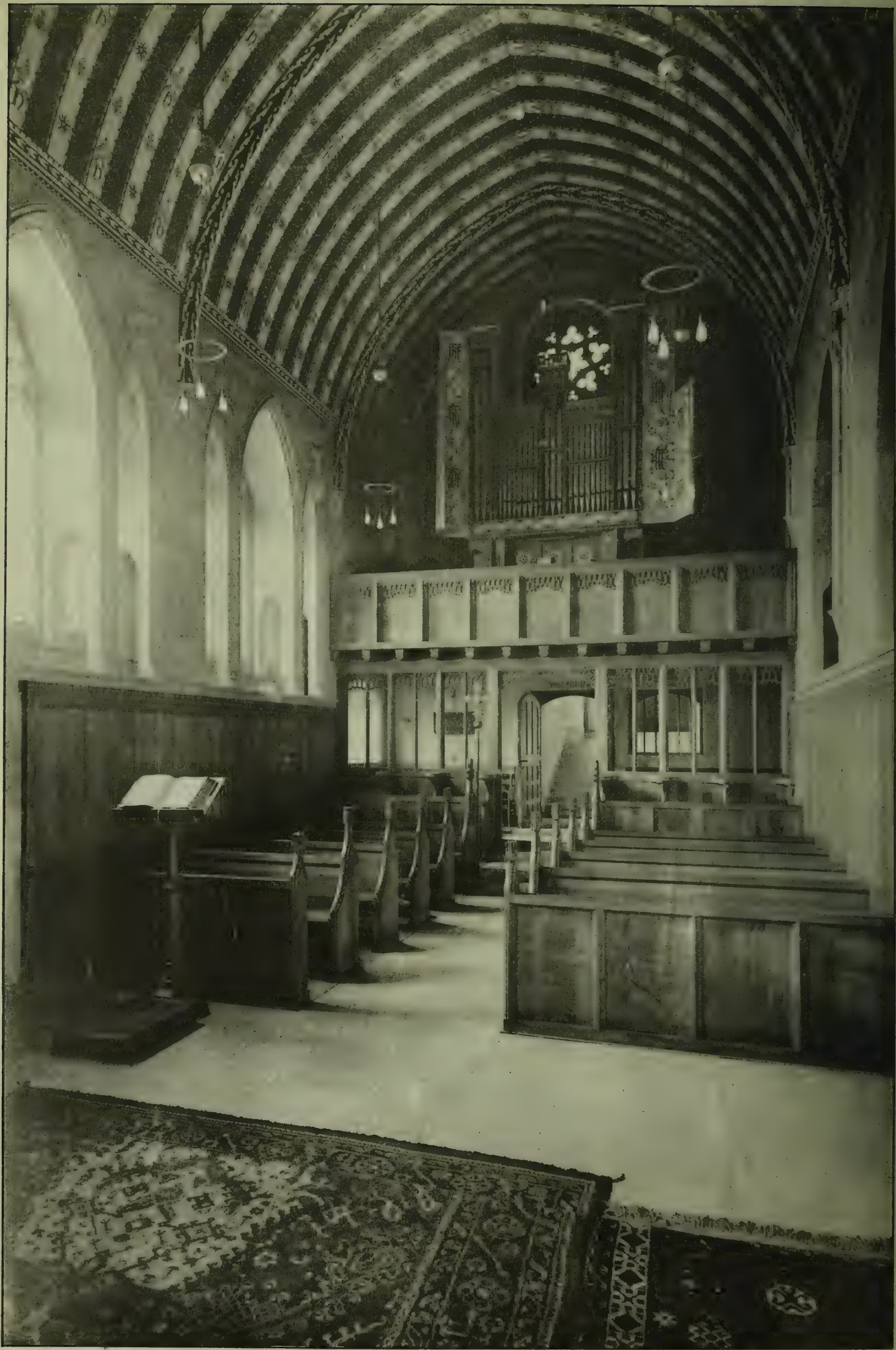
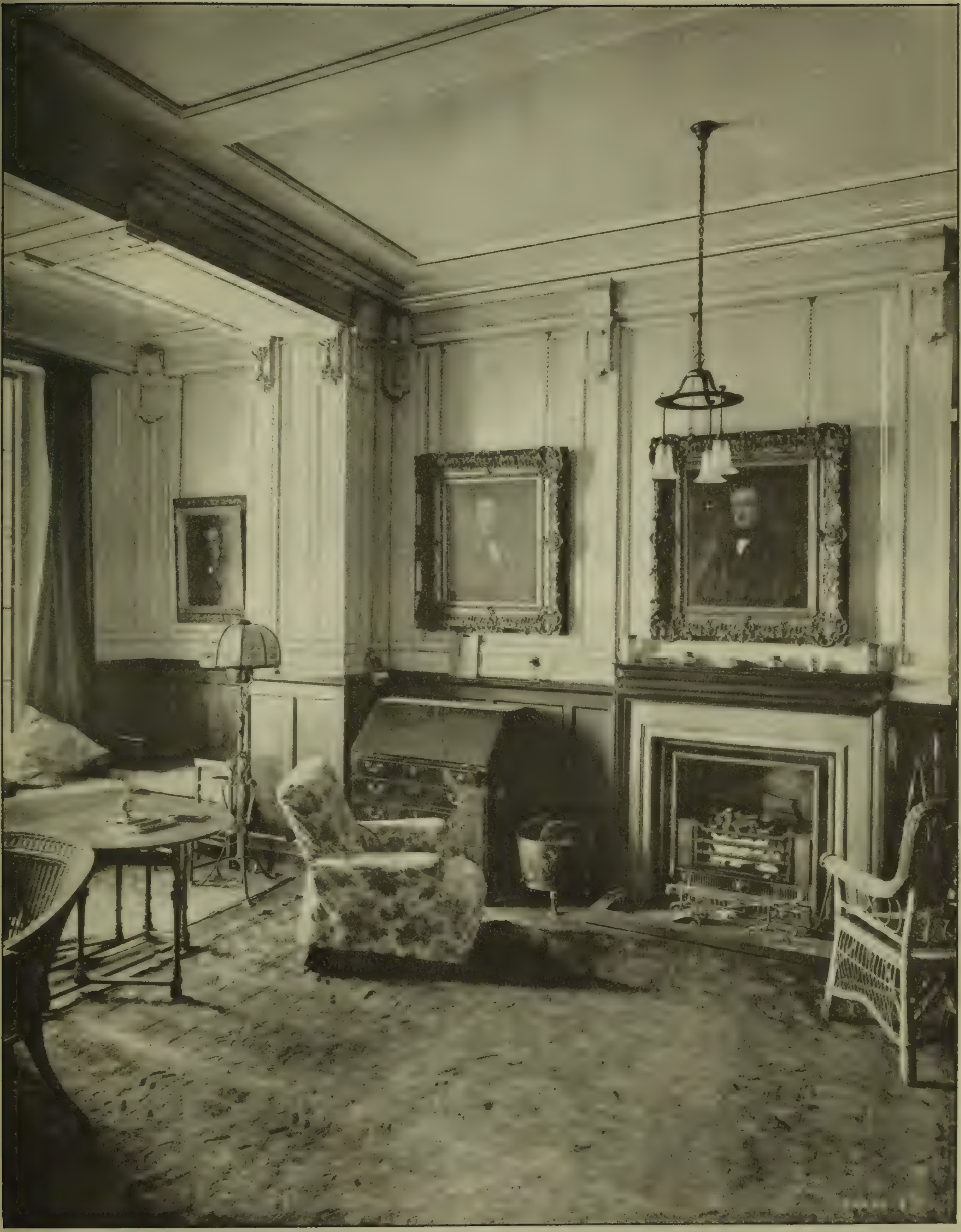


WEST END OF BISHOP'S HOSTEL, LINCOLN.—MR. A. TEMPLE MOORE, ARCHITECT.



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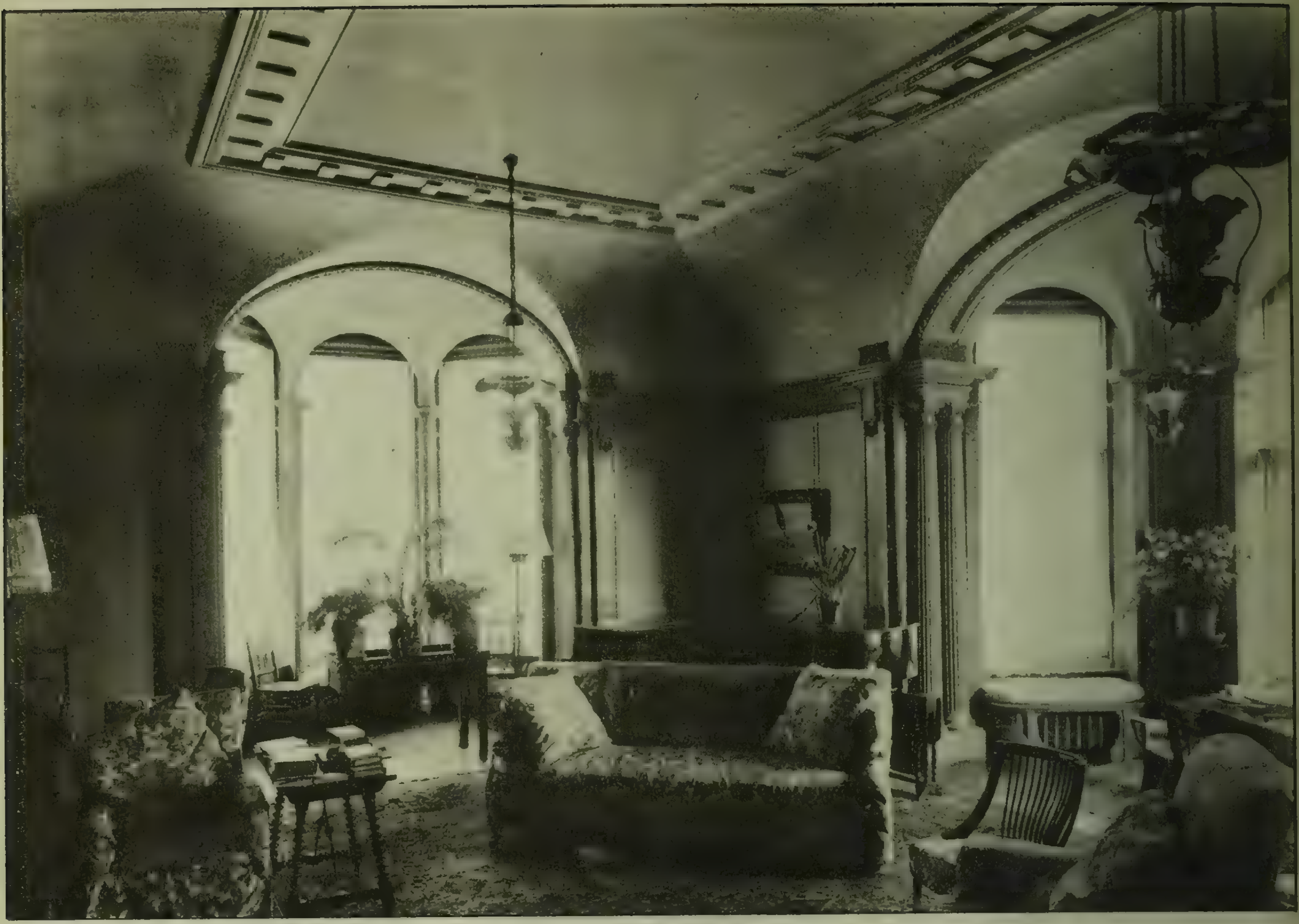

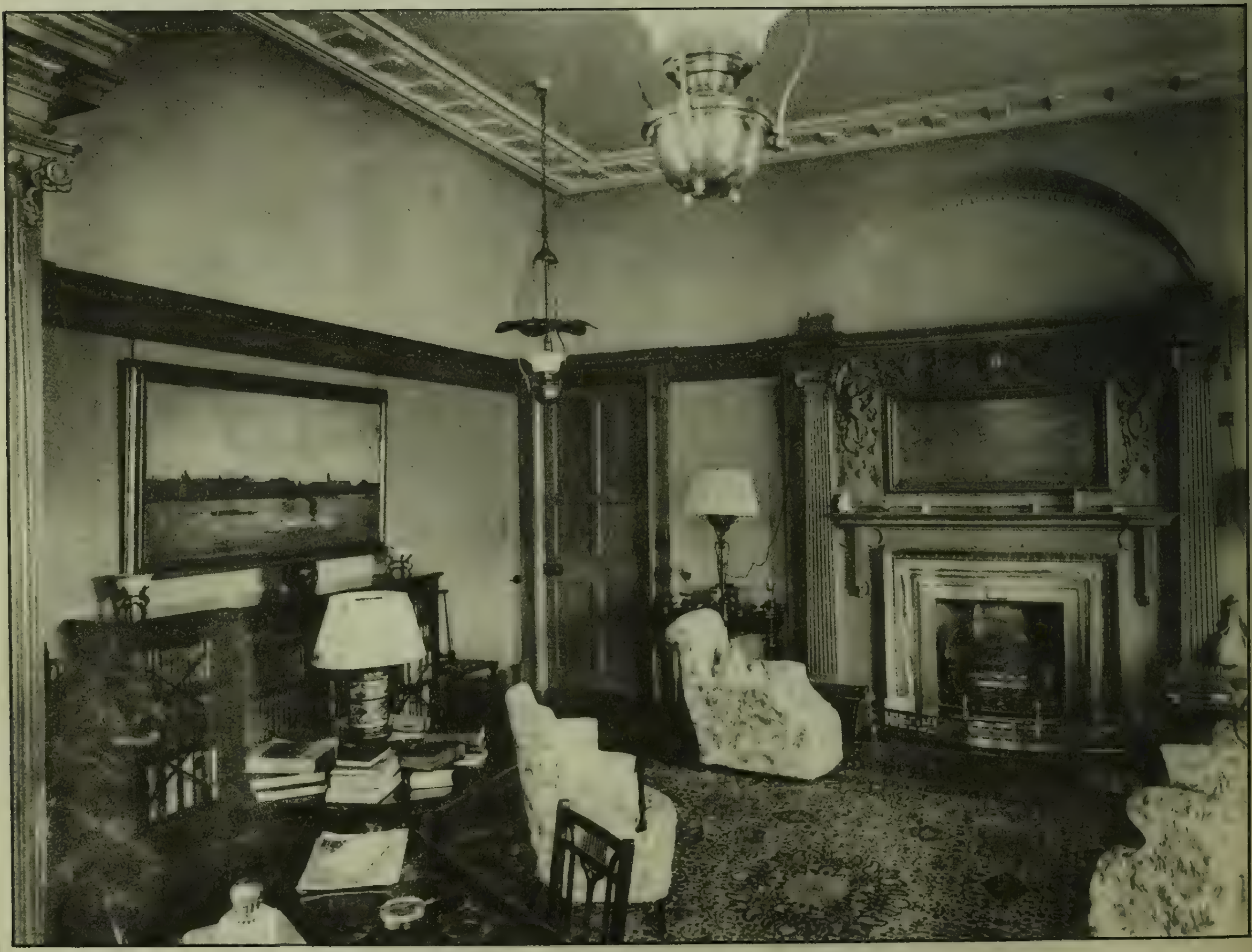

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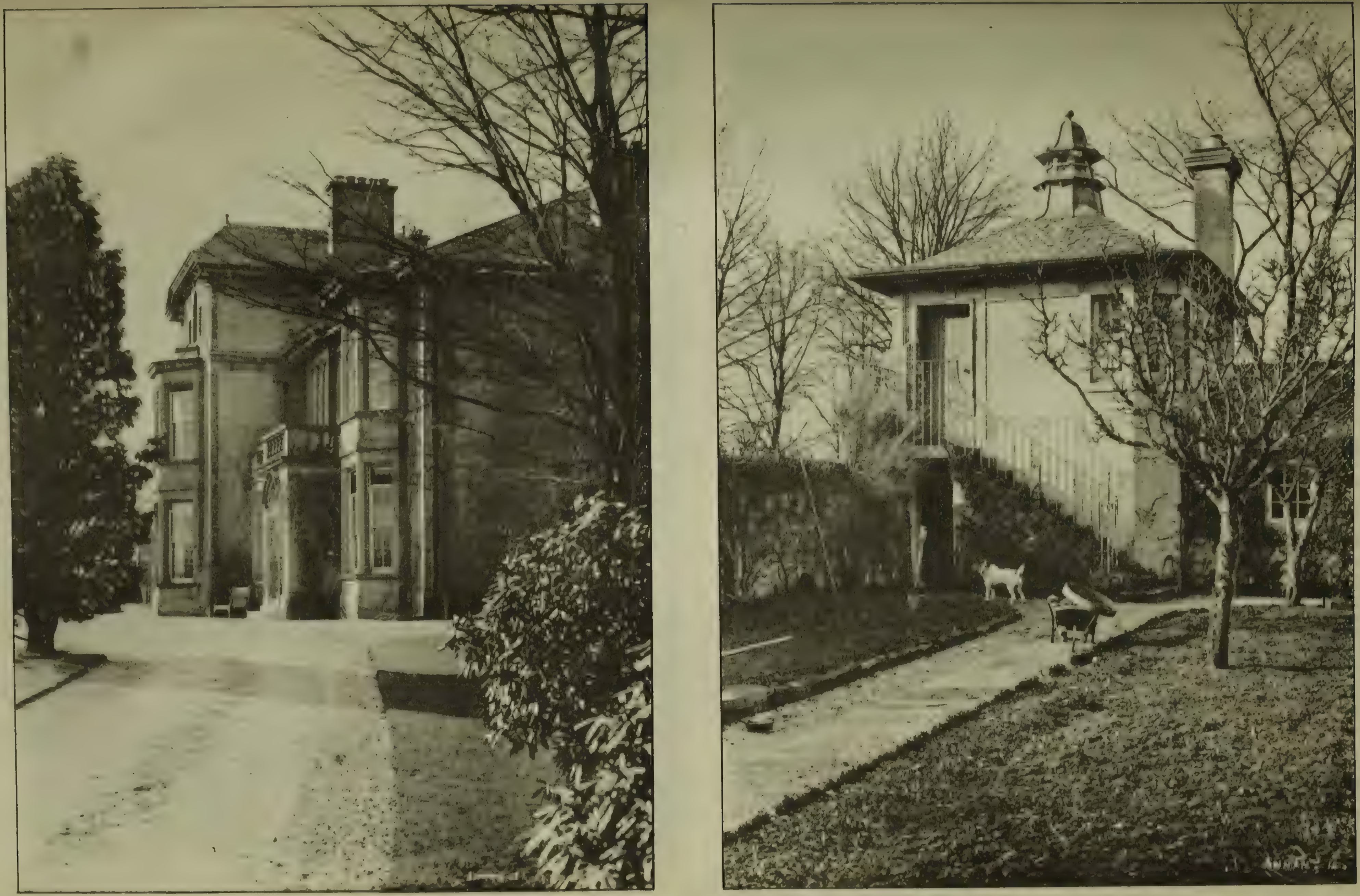

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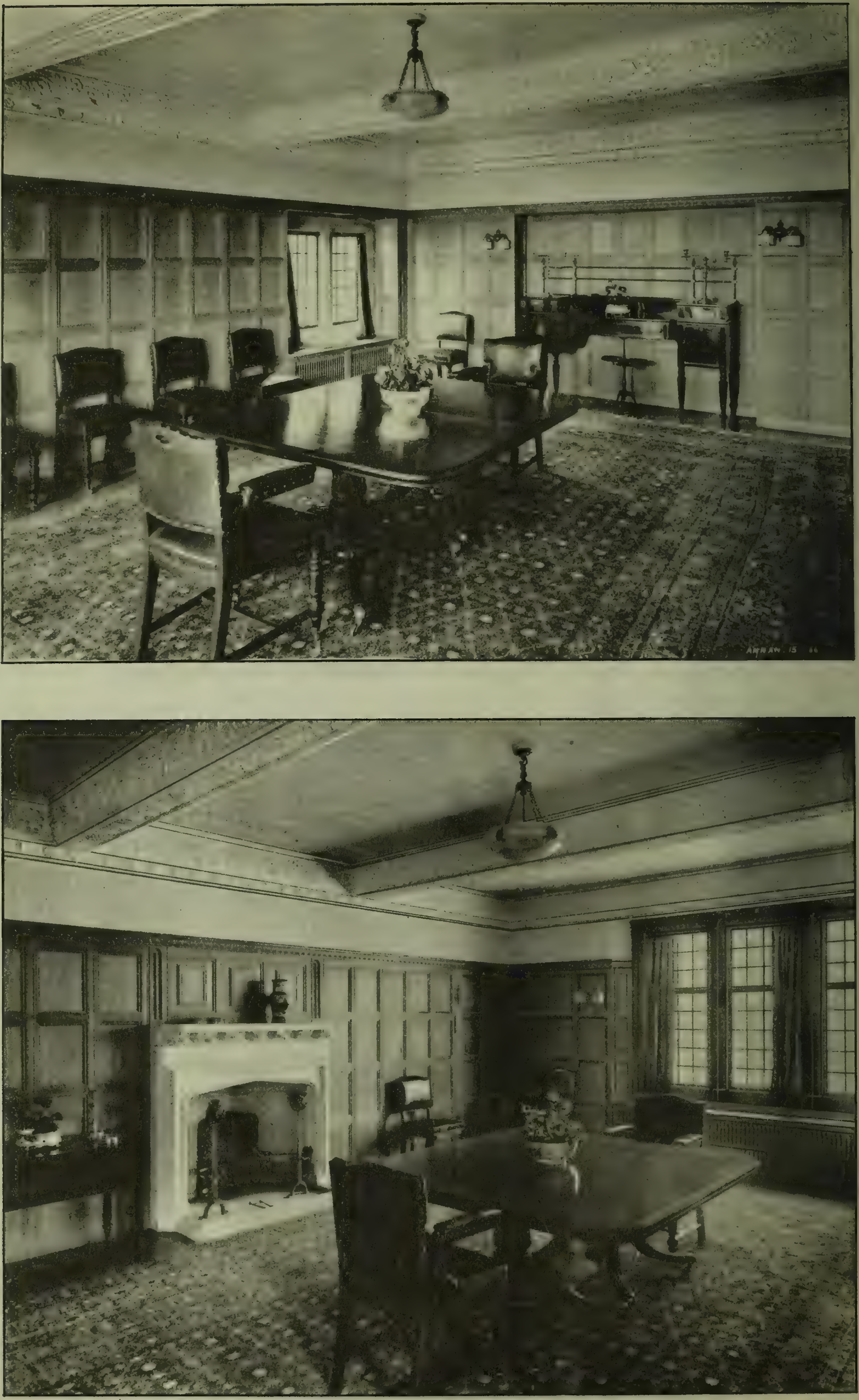

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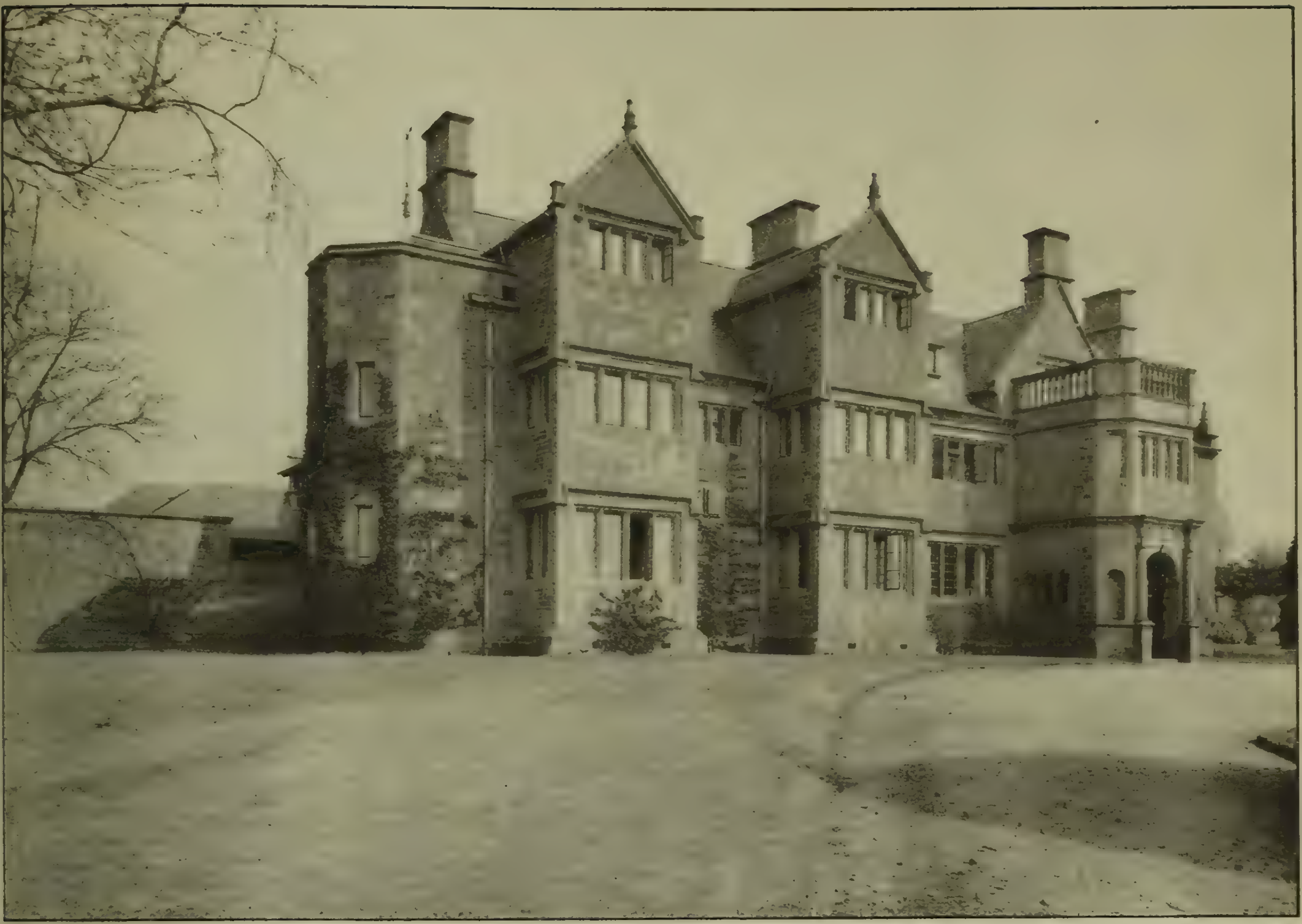

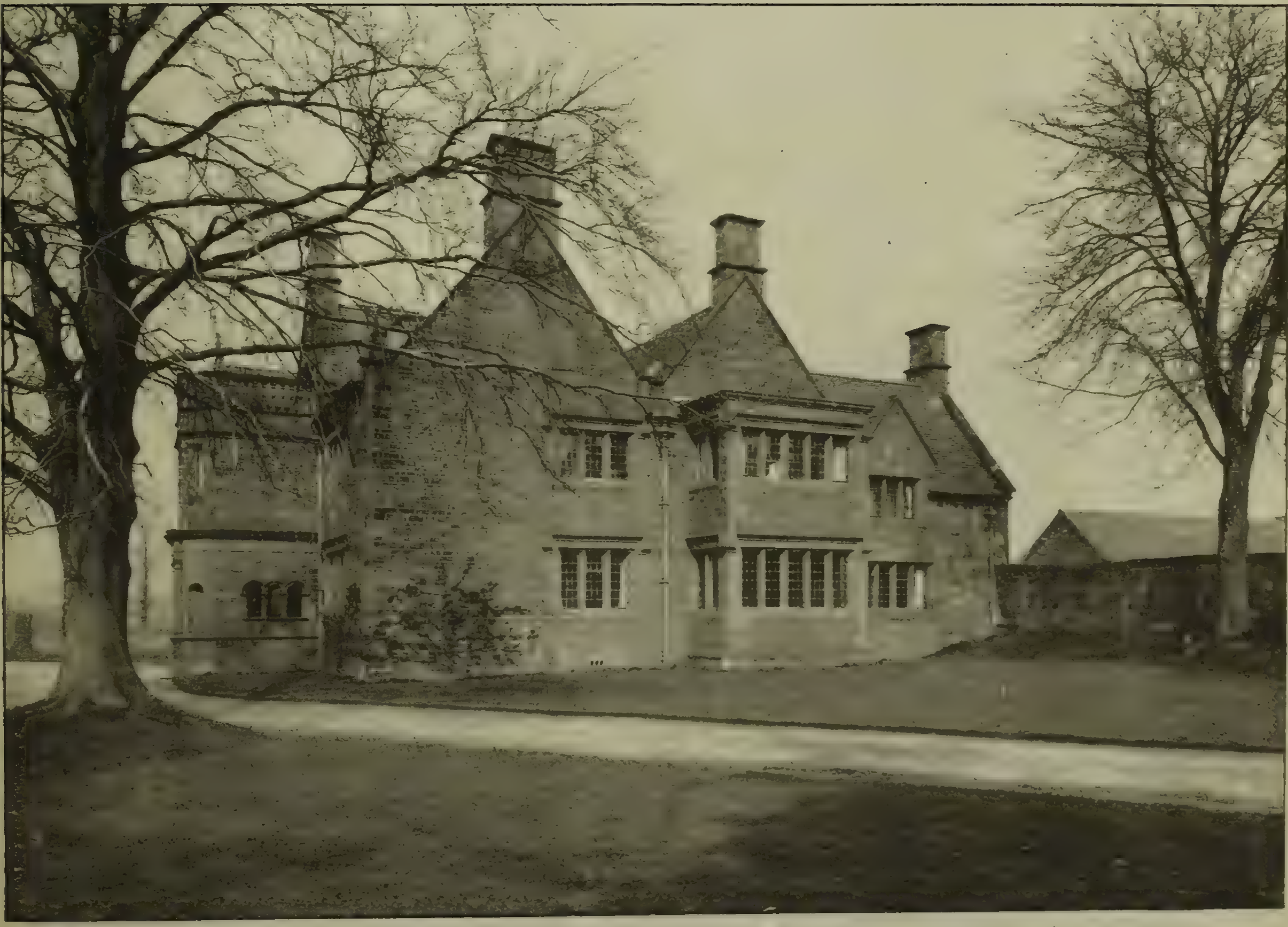

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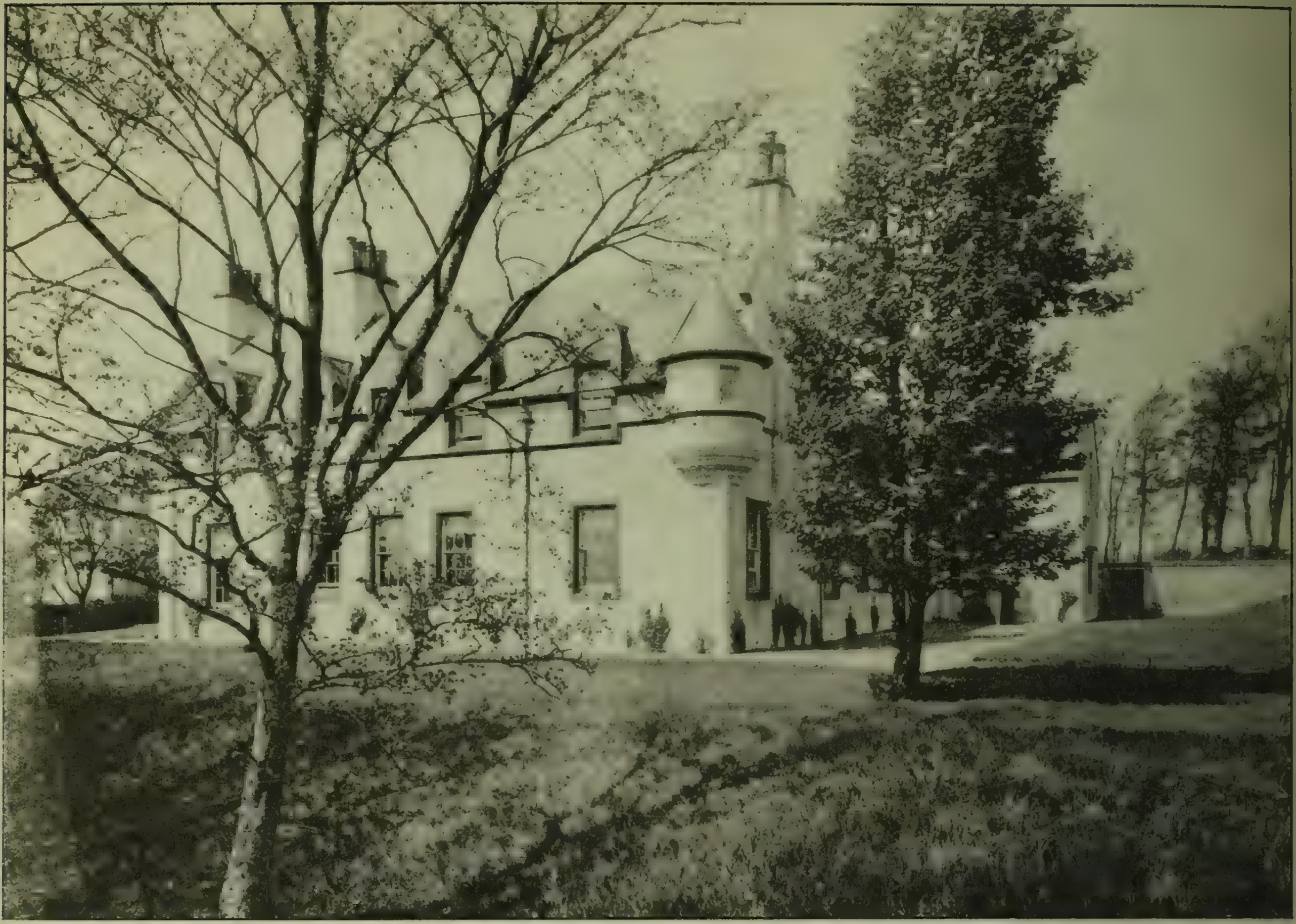

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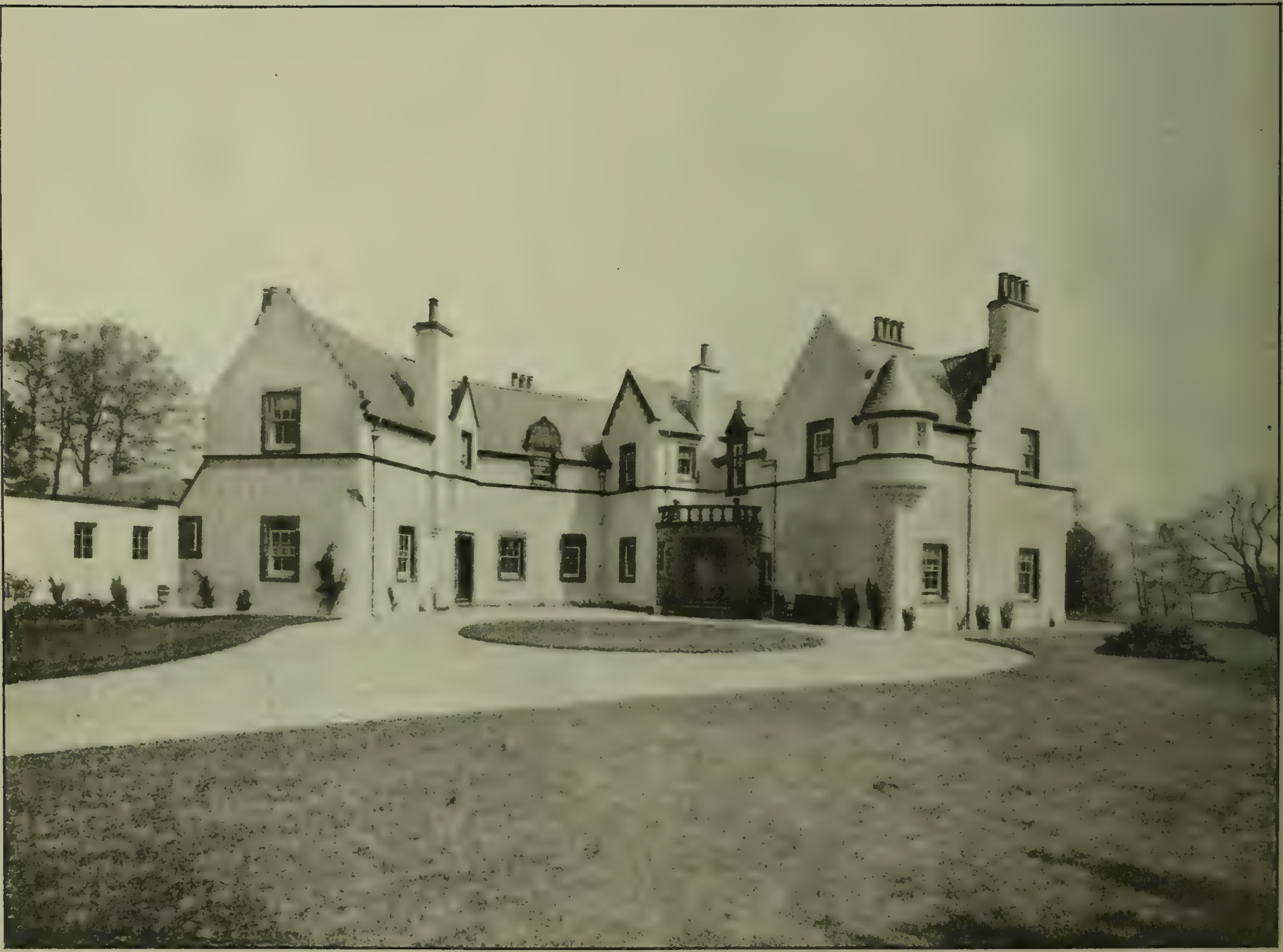

ENTRANCE FRONT.

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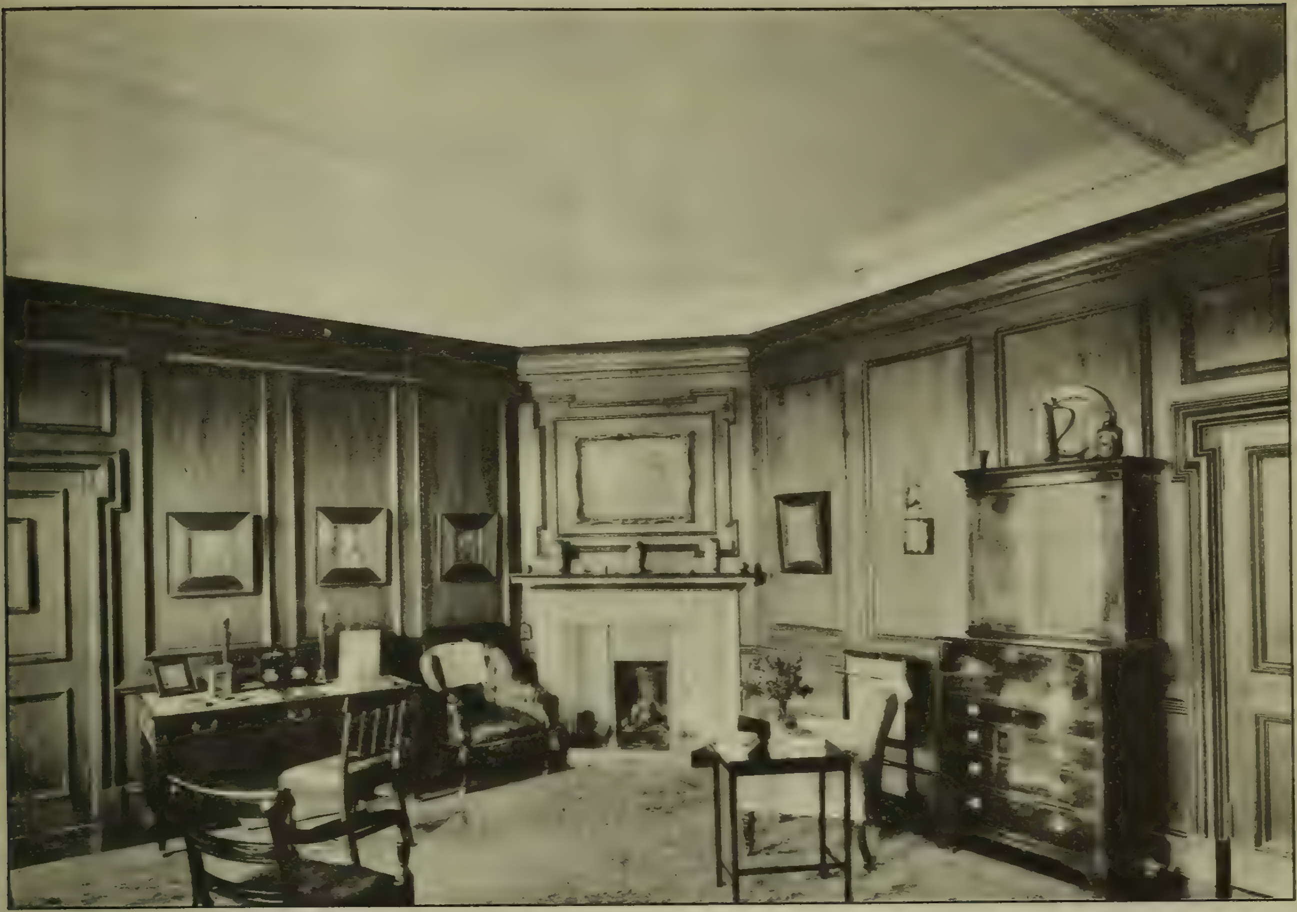
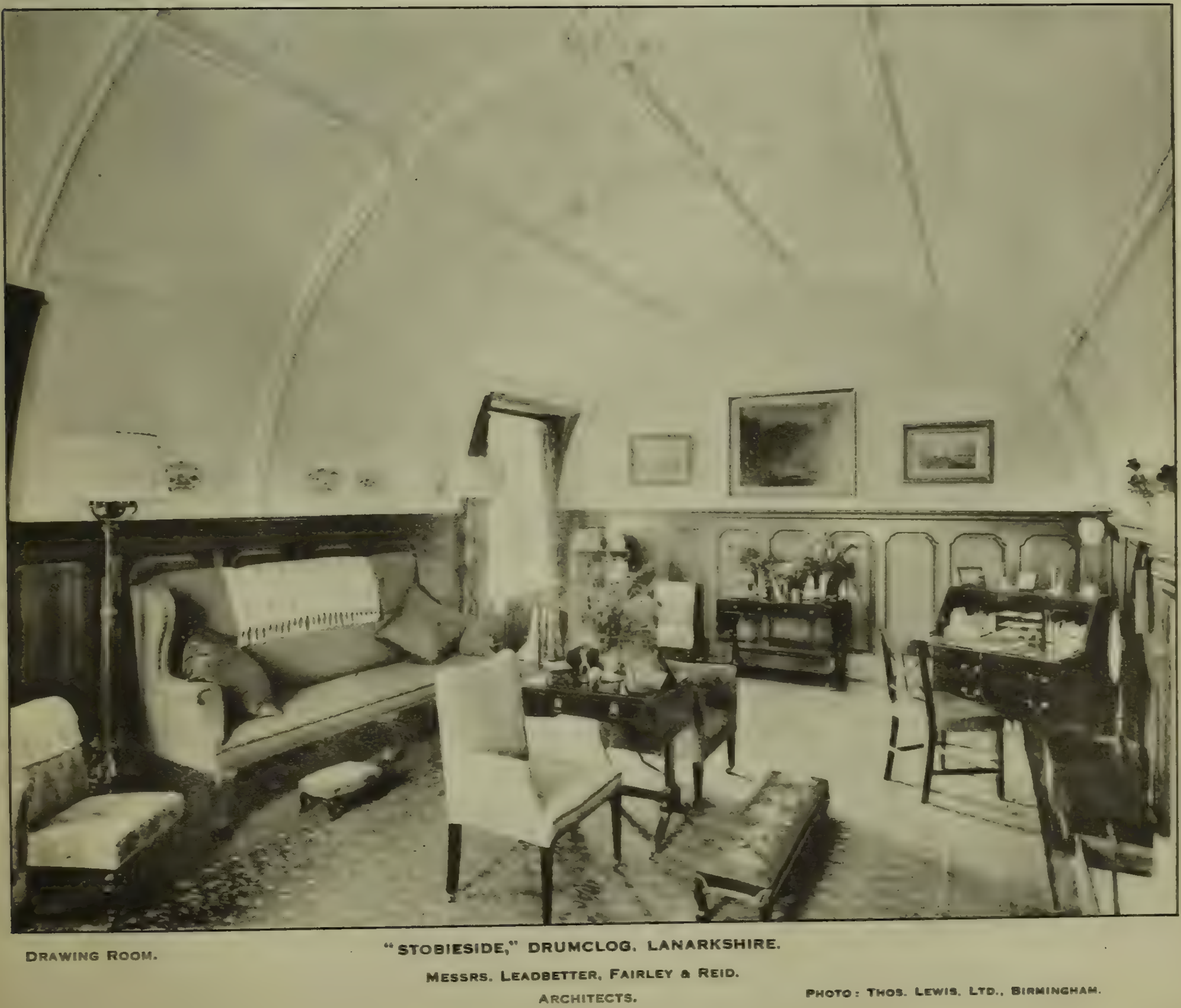


SMOKING ROOM.



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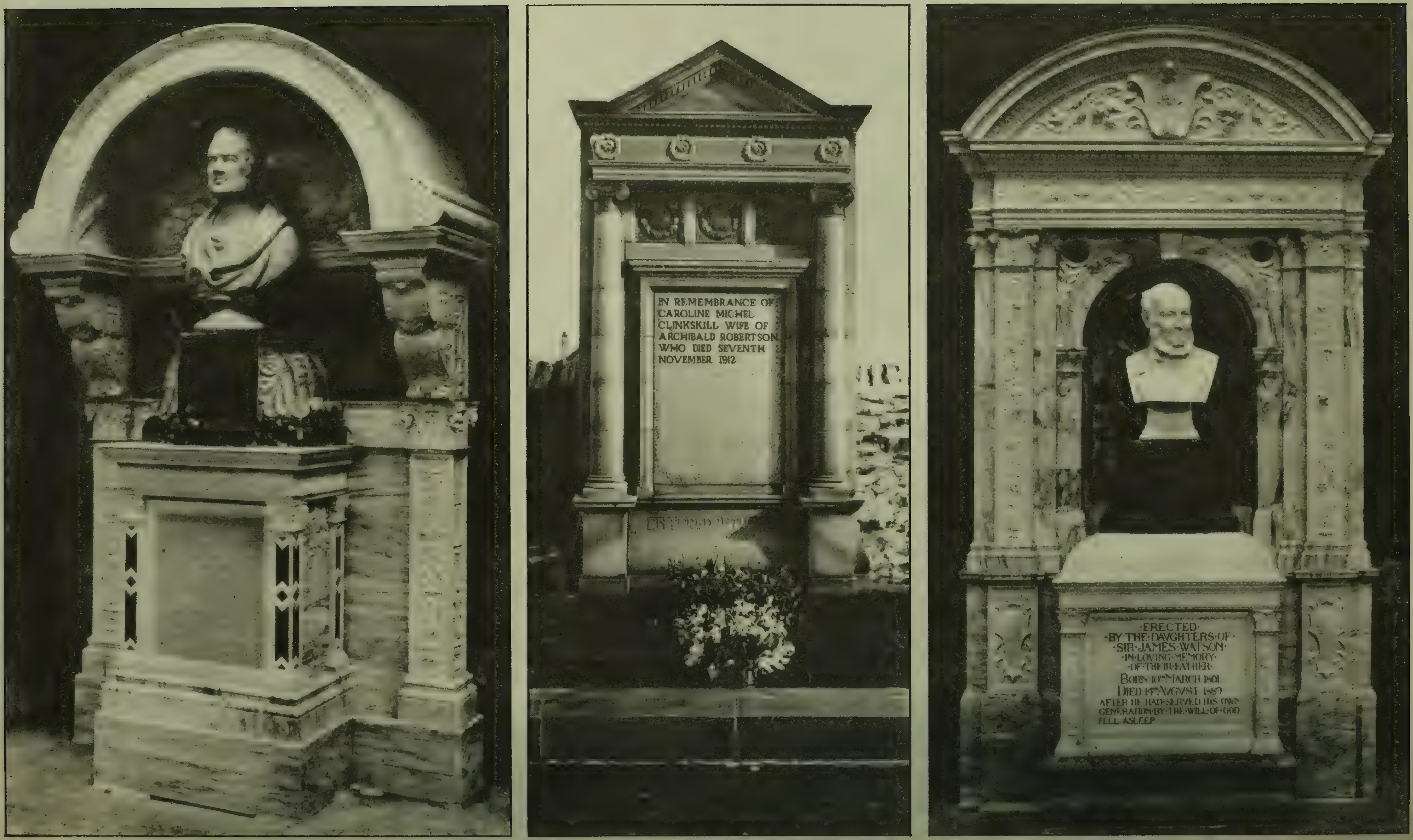
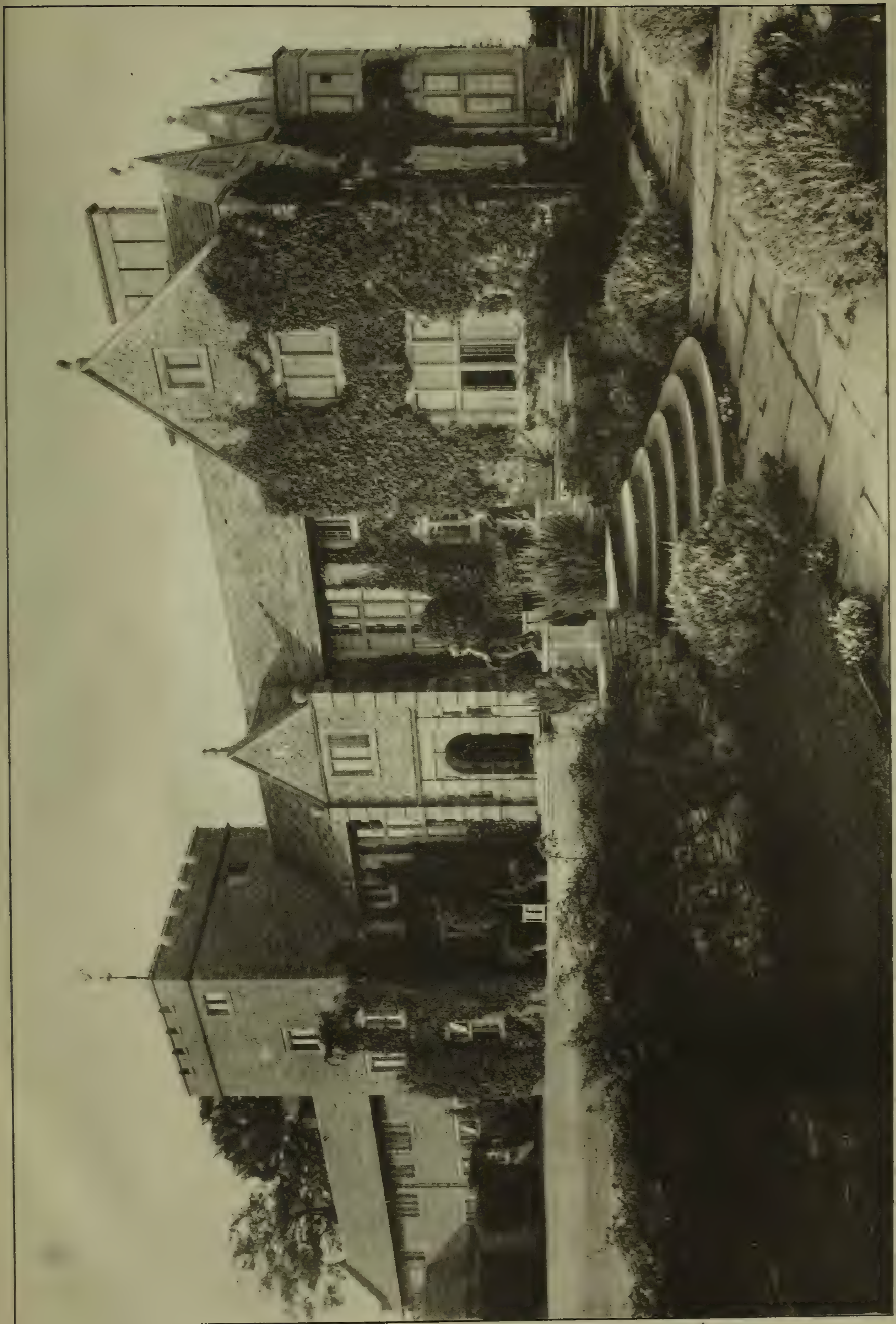
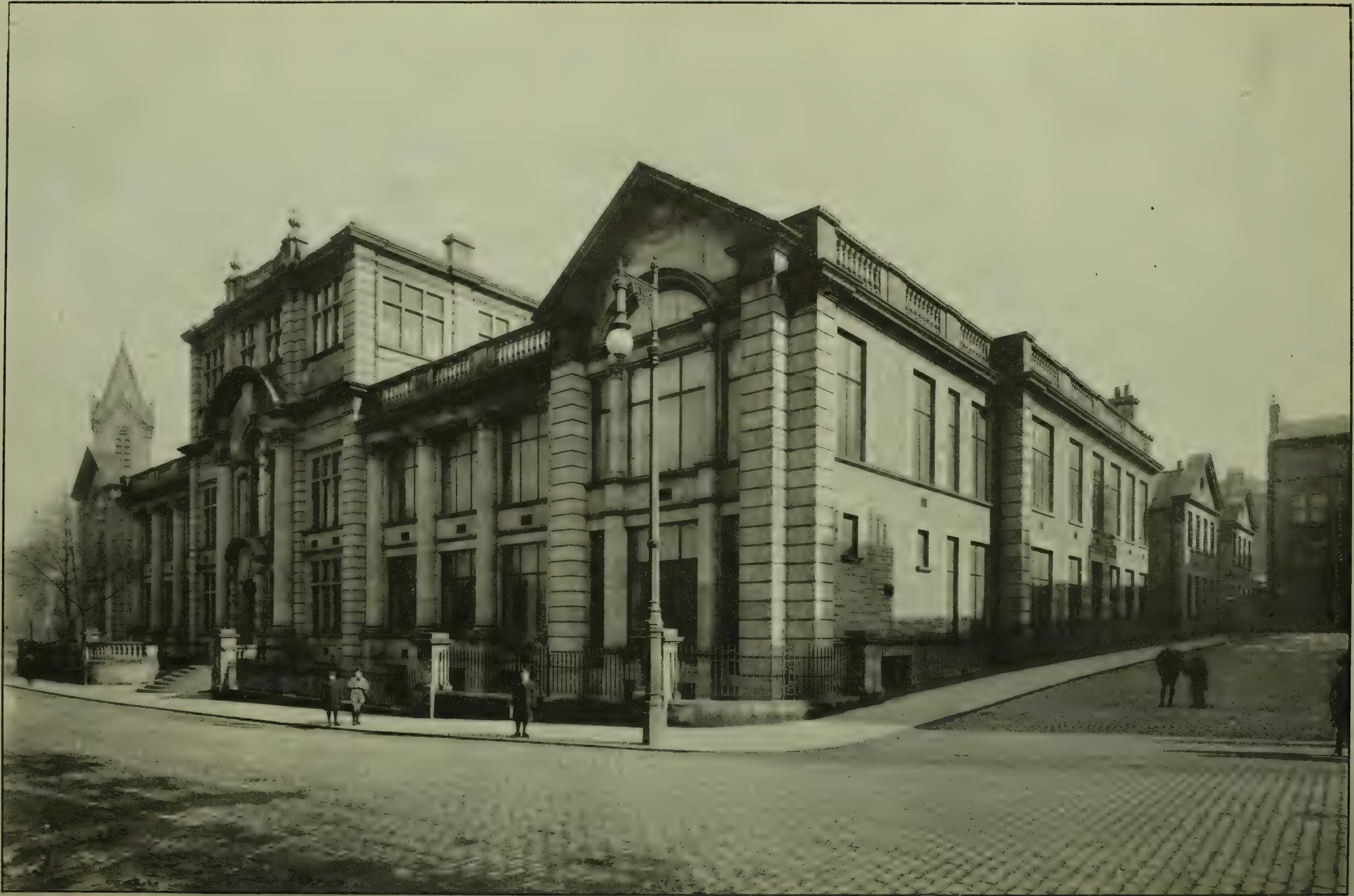


MEMORIALS IN STONE AND MARBLE.—BY MR. JOHN KEPPIE.



EWELME DOWN: FROM N.W. ANGLE GARDEN HOUSE.—MR. WALTER CAVE, ARCHITECT.



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